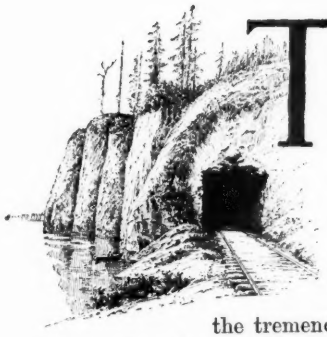
SCRIBNER'S MAGAZINE.

VOL. IV. JULY, 1888. No. 1.

FEATS OF RAILWAY ENGINEERING.

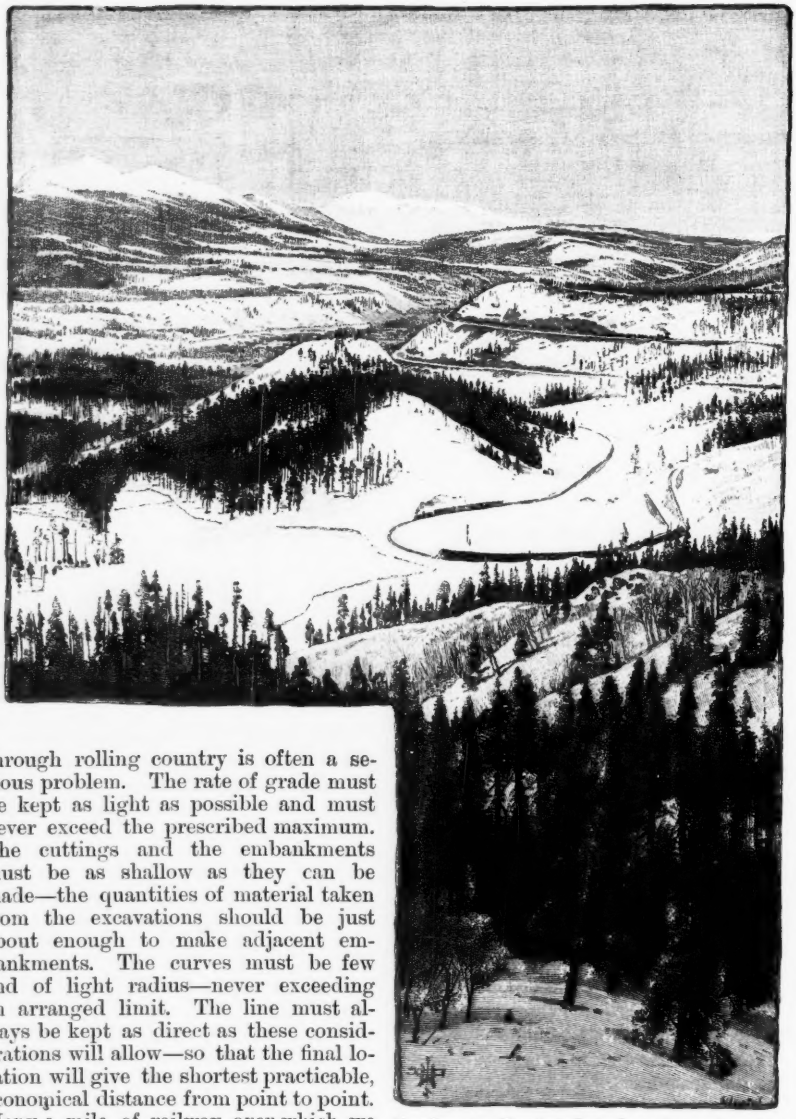
By John Bogart.



THERE are one hundred and fifty thousand miles of railway in the United States: three hundred thousand miles of rails—in length enough to make twelve steel girdles for the earth's circumference. This enormous length of rail is wonderful—we do not really grasp its significance. But the rail itself, the little section of steel, is an engineering feat. The change of its form from the curious and clumsy iron pear-head of thirty years ago to the present refined section of steel is a scientific development. It is now a beam whose every dimension and curve and angle are exactly suited to the tremendous work it has to do. The loads it carries are enormous, the blows it receives are heavy and constant, but it carries the loads and bears the blows and does its duty. The locomotive and the modern passenger and freight cars are great achievements; and so is the little rail which carries them all.

The railway to-day is one of the matter-of-fact associations of our active life. We use it so constantly that it requires some little effort to think of it as a wonderful thing; a creation of man's ingenuity, which did not exist when our grandfathers were young. Its long bridges, high viaducts, dark tunnels may be remarked and remembered by the traveller, but the narrow way of steel, the road itself, seems but a simple work. And yet the problem of location, the determination, foot by foot and mile by mile, of where the line must go, calls in its successful solution for the highest skill of the engineer, whose profession before the railway was created hardly existed at all. Locomotives now climb heights which a few years ago no vehicle on wheels could ascend. The writer, with some engineer friends, was in the mountains of Colorado last year, and saw a train of very intelligent donkeys loaded with ore from the mines, to which no access could be had but by those sure-footed beasts. And since then one of that party of engineers has located and is building a railway to those very mines. No heights seem too great to-day, no valleys too deep, no cañons too forbidding, no streams too wide. If commerce demands, the engineer will respond and the railway will be built.

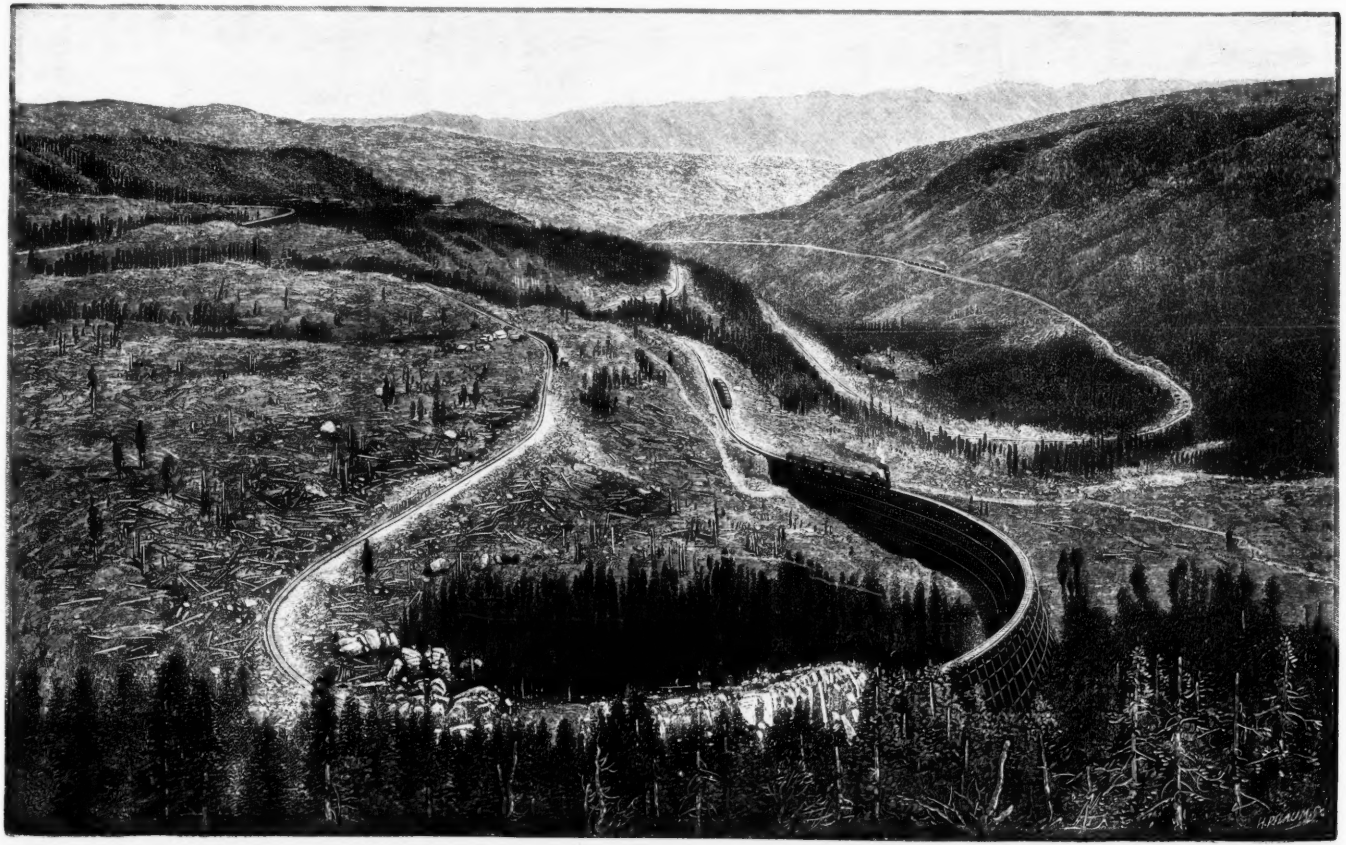
The location of the line of a railway through difficult country requires the trained judgment of an engineer of special experience, and the most difficult country is not by any means that which might at first be supposed. A line through a narrow pass almost locates itself. But the approach to a summit



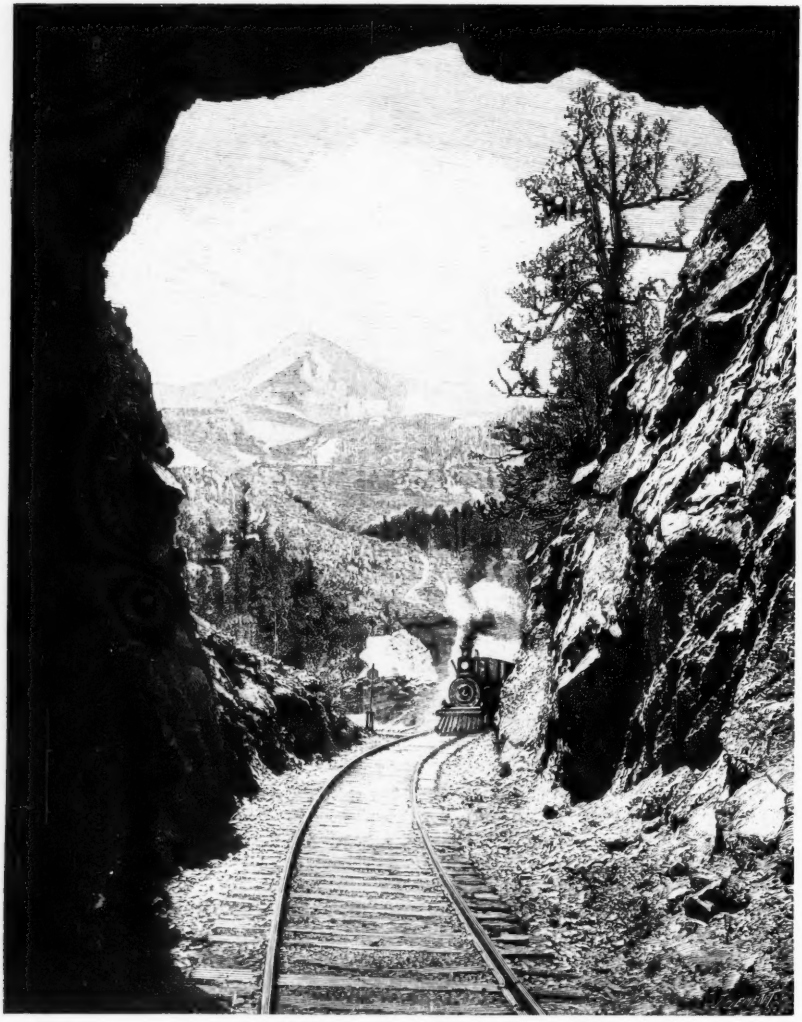
View Down the Blue from Rocky Point; Denver, South Park and Pacific Railroad; showing successive tiers of railway.

through rolling country is often a serious problem. The rate of grade must be kept as light as possible and must never exceed the prescribed maximum. The cuttings and the embankments must be as shallow as they can be made—the quantities of material taken from the excavations should be just about enough to make adjacent embankments. The curves must be few and of light radius—never exceeding an arranged limit. The line must always be kept as direct as these considerations will allow—so that the final location will give the shortest practicable, economical distance from point to point. Many a mile of railway over which we travel now at the highest speed, has been a weary problem to the engineer of location, and he has often accomplished a really greater success by securing a line which seems to closely fit the country over which it runs without marking itself sharply upon nature's moulding, than if he had with apparent boldness cut deep into the hills and raised embankments and viaducts high over lowlands and valleys.

But roads must run through many



Loop near Hagerman's, on the Colorado Midland Railway.

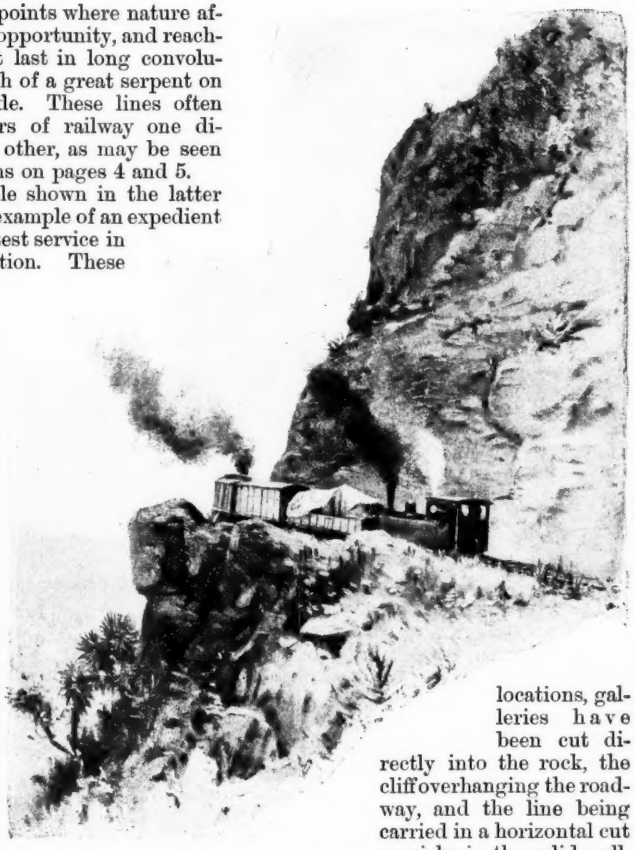


Portal of a Finished Tunnel; showing Cameron's Cone, Colorado.

regions where very different measures must be taken to secure a location practicable for traffic. For instance, a line at a high elevation approaches a wide valley which it must cross. The rate of descent is fixed by the established maximum grade and the sides of the valley are much steeper than that rate. Then the engineer must gain distance—that is to say, he must make the line long enough to overcome the vertical height. This can often be accomplished by carrying it up the valley on one side and down on the other. Tributary valleys can be made use of if necessary, and the desired crossing thus accomplished. But at times even these expedients will not suffice. Then the line is made to bend upon itself and wind down the hillside upon benches cut into the earth, or

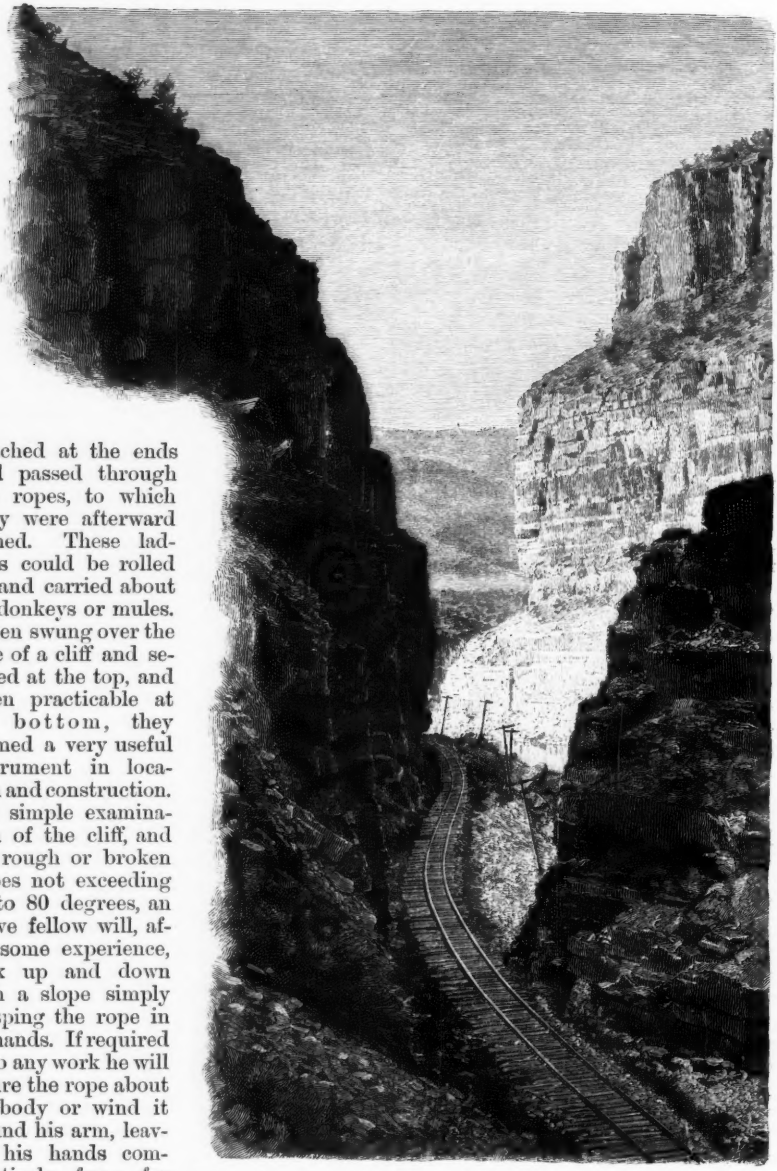
rock, curving at points where nature affords any sort of opportunity, and reaching the valley at last in long convolutions like the path of a great serpent on the mountain side. These lines often show several tiers of railway one directly above the other, as may be seen in the illustrations on pages 4 and 5.

The long trestle shown in the latter illustration is an example of an expedient often of the greatest service in railway construction. These trestles are built of wood, simply but strongly framed together, and are entirely effective for the transport of traffic for a number of years. Then they must be renewed, or, what is better, be replaced by embankment, which can be gradually made by depositing the material from cars on the trestle itself. The trestle illustrated is interesting as conforming to the curve of the line, which in that country, the mountains of Colorado, was probably a necessity of location.



Peña de Mora on the La Guayra and Carácas Railway, Venezuela.

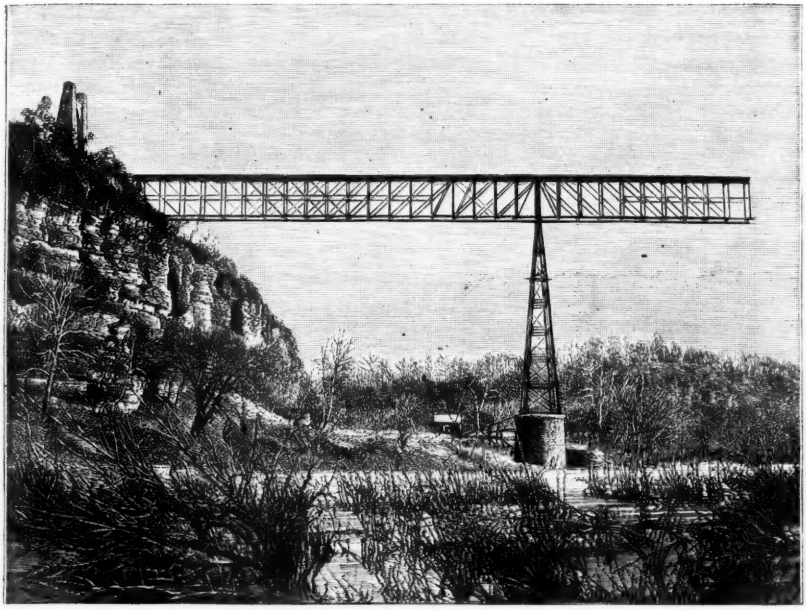
Where the direct turning of a line upon itself may not be necessary, there may and often must be bold work done in the construction of the road upon a mountain side. It must be supported where necessary by walls built up from suitable foundations, often only secured at a great depth below the grade of the road. Projecting points of rock must be cut through, and any practicable natural shelf or favorable formation must be made use of, as in the picture above. In some of the mountain locations, galleries have been cut directly into the rock, the cliff overhanging the roadway, and the line being carried in a horizontal cut or niche in the solid wall. The Oroya and the Chimbote railways in South America demanded constant locations of this character. At many points it was necessary to suspend the persons making the preliminary measurements, from the cliff above. The engineer who made these locations tells the writer that on the Oroya line the galleries were often from 100 to 400 feet above the base of the cliff and were reached generally from above. Rope ladders were used to great advantage. One 64 feet long and one 106 feet long covered the usual practice, and were sometimes spliced together. The side ropes were $\frac{3}{4}$ and $1\frac{1}{4}$ inch in diameter, and the rounds of wood $1\frac{1}{4}$ inch in diameter, and 16 inches and 24 inches long. These were



Denver and Rio Grande Railway Entering the Portals of the Grand River Cañon, Colorado.

notched at the ends and passed through the ropes, to which they were afterward lashed. These ladders could be rolled up and carried about on donkeys or mules. When swung over the side of a cliff and secured at the top, and when practicable at the bottom, they formed a very useful instrument in location and construction. For simple examination of the cliff, and for rough or broken slopes not exceeding 70 to 80 degrees, an active fellow will, after some experience, walk up and down such a slope simply grasping the rope in his hands. If required to do any work he will secure the rope about his body or wind it around his arm, leaving his hands comparatively free for light work.

The boatswain's chair, consisting of a wooden seat 6 inches wide and two feet long through the ends of which pass the side ropes, looped at the top, and having their ends knotted, is a particularly convenient seat to use where cliffs overhang to a slight degree. The riggers were generally Portuguese sailors, who

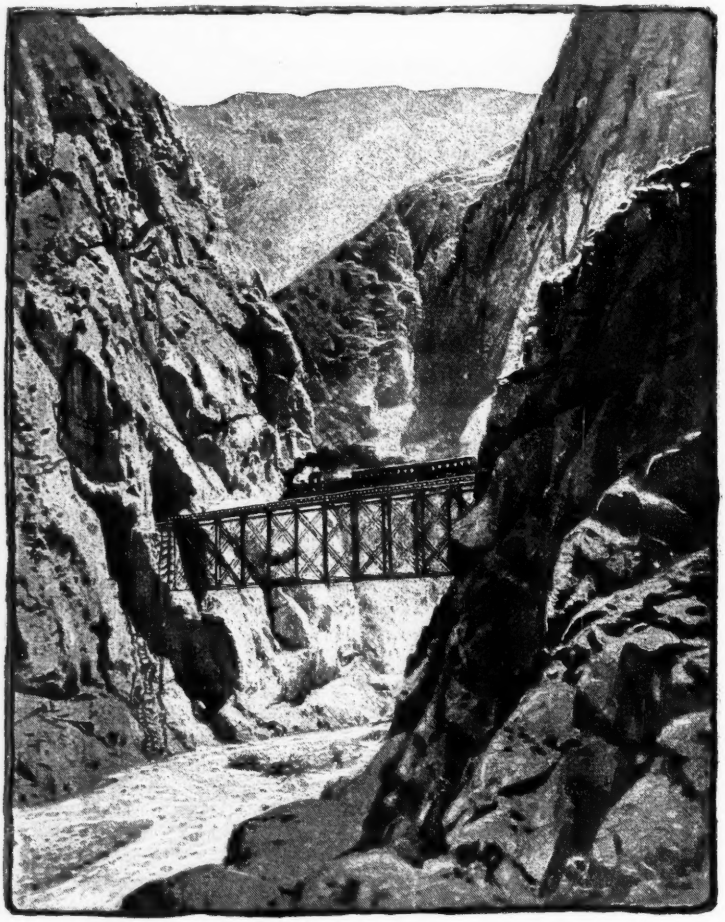


The Kentucky River Cantilever, on the Cincinnati Southern Railway.

seemed to have more agility and less fear than any other men to be found. At *Cuesta Blanca*, on the Oroya, a prominent discoloration on the cliff served as a triangulation point for locating the chief gallery. Men were swung over the side of the cliff in a cage about 2½ feet by 6 feet, open at the top and on the side next the rock. This was a peculiar cliff about 1,000 feet high, rising from the river at a general slope of about 70 degrees. The grade line of the road was 420 feet above the river. The Chileno miners climbed up a rope ladder to a large seam near grade where they lived; provisions, water, etc., being hoisted up to them. The first men sent over the cliff to begin the preliminary work were lowered in a cage and took their dinners with them, for fear they would not return to the work, and that unless a genuine start was made others could not be induced to take their places. It is safe to say that 80 per cent of the sixty odd tunnels on the Oroya and the seven tunnels on the Chimbote lines were located and constructed on lines determined by triangulation, and the results were so satisfactory that the method may be depended upon as the best system for determining topographical data or for locating and constructing the lines in any similar locality.

Where the rocks close in together, as in some of the cañons of our Southwest, the railway curves about them and finds its way often where one would hardly suppose a decent wagon road could be built. The portals of the Grand River Cañon, as seen on the opposite page, show such a line, passing through narrow gateways of rock rising precipitously on either side to enormous heights.

When such a cañon or a narrow valley directly crosses the line of the road, it must be spanned by a bridge or viaduct. The Kentucky River Bridge, shown above, is an instance. The Verrugas Bridge on the Lima and Oroya Railroad in Peru is another. This bridge is at an elevation of 5,836 feet above sea-level. It crosses a ravine at the bottom of which is a small stream. The bridge is 575 feet long, in four spans, and is supported by iron towers, the central



Truss over Ravine, and Tunnel, Oroya Railroad, Peru.

one of which is 252 feet in height. The construction was accomplished entirely from above, the material all having been delivered at the top of the ravine, and the erection was made by lowering each piece to its position. This was done by the use of two wire-rope cables, suspended across the ravine from temporary towers at each end of the bridge.

On the line of the same Oroya Railroad is a striking example of the difficulties encountered in such mountain country and of the method by which they have been overcome. A tunnel reaches a narrow gorge, a truss is thrown across—and the tunnel continued.

Nature's wildest scenery, the deep ravine, the mountain cliffs, and the graceful truss carrying the locomotive and train safely over what would seem an impossible pass, here combine to give a vivid illustration of an engineering feat.

The location of a part of the Mexican Central Railway through the cut of Nochistongo is peculiarly interesting. Far underneath the level of this line of railway there was skilfully constructed, in

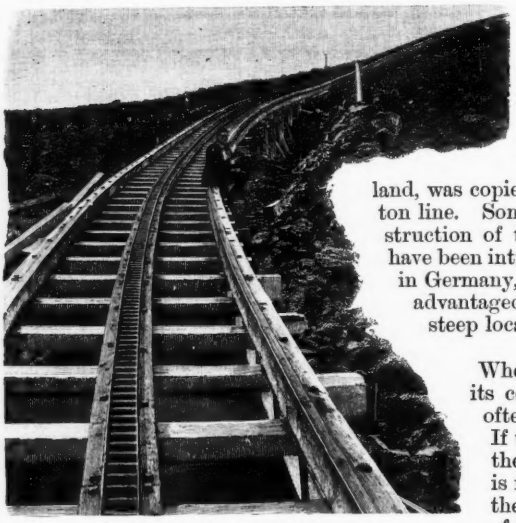
1608, a tunnel which at that period was a very bold piece of engineering. It was designed to drain the Valley of Mexico, which has no natural outlet. This tunnel was more than six miles long and ten feet wide. It was driven through the formation called *tepetate*, a peculiar earth with strata of sand and marl. It was finished in eleven months. At first excavated without a lining, it was afterward faced with masonry. It was not entirely protected when a great flood came, the dikes above gave way, and the tunnel became obstructed. The City of Mexico was flooded, and it was decided that, instead of repairing the tunnel an open cut should be made. The engineer who had constructed the tunnel, Enrico Martinez, was put in charge of this enormous undertaking, and others took his place after his death. The cut is believed to be the largest ever made in the world. For more than a century the work was continued. Its greatest depth is now 200 feet. It was cut deeper, but has partially filled with the washings from the slopes. The cost was enormous, more than 6,000,000 dollars in silver having been actually disbursed! Wages for workmen were then from 9 to 12 cents a day. All convicts sentenced to hard labor were put at work in the great cut. The loss of life was very great. Writers of the time state that more than 100,000 Indians perished while engaged in the work.

The Nochistongo Cut, Mexican Central Railway.

When a line of railway encountered a grade too steep for ascent by the traction of the locomotive, the earlier engineers adopted the inclined plane. Such planes were in use at important points during many years. Notable instances were those by which traffic was carried across the Alleghany Mountains, connecting on each side with the Pennsylvania railway lines. These old planes are still visible from the present Pennsylvania Railroad where it crosses the summit west of Altoona. The planes were operated by stationary engines acting upon cables attached to the cars. These cables passed around drums at the head of the planes, the weight of the cars on one track partially balancing those on the other. Similar planes were in use also at Albany, Schenectady, and other places.

Another effective expedient is the central rack rail. No better or more successful example of this method of construction can be given than the Mount Washington Railway [illustrated p. 12]. The road was completed in 1869. Its length is $3\frac{1}{8}$ miles and its total rise 3,625 feet. Its steepest grade is about 1 foot rise in every 3 feet in length; the average grade is 1 in 4. It is built of heavy timber, well bolted to the rock. Low places are spanned by substantial trestle work. The gauge of the road is 4 feet $7\frac{1}{2}$ inches, and it is provided with the two ordinary rails and also the central rack rail, which is really like an iron ladder, the sides being of angle iron and the cross-pieces of round iron

1½ inch in diameter and 4 inches apart. Into these plays the central cog-wheel on the locomotive, which thus climbs this iron ladder with entire safety. Very complete arrangements are made to prevent the descent of the train in case of accident to the machinery. The locomotive is always below the train, and pushes it up the mountain. Many thousands of passengers have been transported every year without accident.

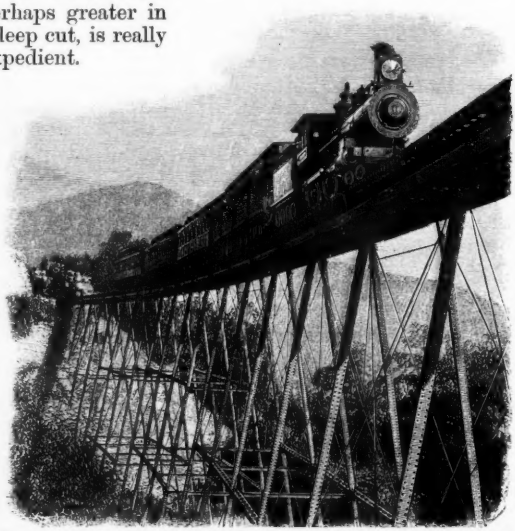


The Mount Washington Rack Railroad.

The rack railroad ascending the Righi, in Switzerland, was copied after the Mount Washington line. Some improvements in the construction of the rack rail and attachments have been introduced upon mountain roads in Germany, and this system seems very advantageous for use in exceptionally steep locations.

When a line of railway meets in its course a barrier of rock, it is often best to cut directly through. If the grade is not too far below the surface of the rock, the cut is made like a great trench with the sides as steep as the nature of the material will allow. Very deep cuts are, however, not desirable. The rains bring down upon their slopes the softer material from above, and the frost detaches pieces of rock which, falling, may result in serious accidents to trains. Snow lodges in these deep cuts, at times entirely stopping traffic, as in the recent experience near New York. A tunnel, therefore, while perhaps greater in first cost than a moderately deep cut, is really often the more economical expedient.

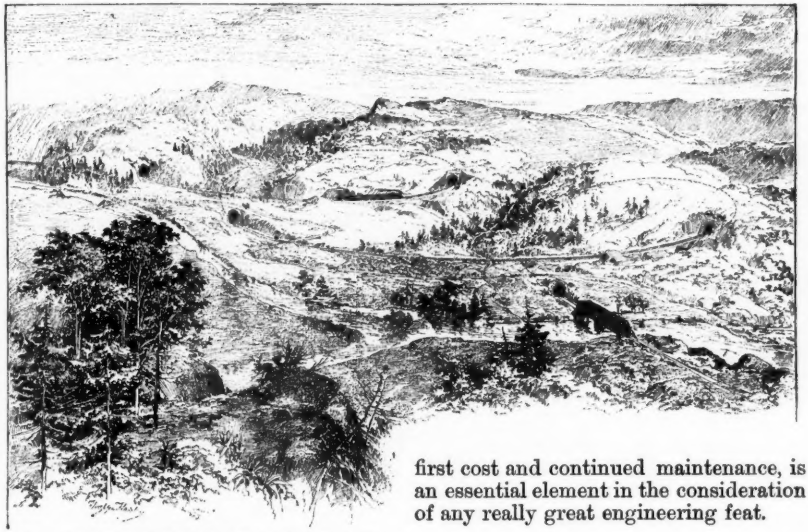
And here is as good a place, perhaps, as any other in this article, to say that true engineering is the economical adaptation of the means and opportunities existing, to the end desired. Civil engineering was defined. by one of the greatest of England's engineers, as "the art of directing the great sources of power in nature for the use and convenience of man," and that definition was adopted as a fundamental idea in the charter of the English Institution of Civil Engineers. But the development of engineering works in America has been



Trestle on Portland and Ogdensburg Railway, Crawford Notch, White Mountains.

effected successfully by American engineers only because they have appreciated another side of the problem presented to them. A past president of the American Society of Civil Engineers, a man of rare judgment and remarkable executive ability, the late Ashbel Welch, said, in discussing a great undertaking proposed by an eminent Frenchman: "That is the best engineering, not which makes the most splendid, or even the most perfect, work, but that which makes a work that answers the purpose well, at the least cost." And it may be remarked, as to the project which he was then discussing, that after a very large expenditure and an experience of eight years since that discussion, the plans of the work have been modified and the identical suggestions made by Mr. Welch of a radical economical change have been this year adopted.* Another eminent American engineer, whose practical experience has been gained in the construction and engineering supervision of more than five thousand miles of railway, said, in his address as President of the American Society of Civil Engineers: "The high object of our profession is to consider and determine the most economic use of time, power, and matter."

That true economy, which finally secures in a completed work the best results from the investment of capital, in first cost and continued maintenance, is an essential element in the consideration of any really great engineering feat.



Perspective View of St. Gothard Spiral Tunnels, in the Alps.

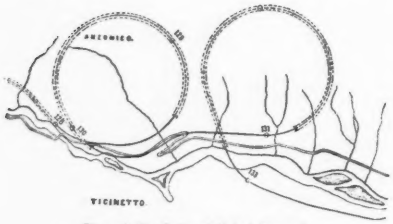
The difficulties involved in the construction of a tunnel, after the line and dimensions have been determined, depend generally upon the nature of the material found as the work advances. Solid rock presents really the fewest difficulties, but it is seldom that tunnels of considerable length occur without meeting material which requires special provision for successful treatment. In some cases great portions of the rock, where the roof of the tunnel is to be, press downward with enormous weight, being detached from the adjacent mass by the occurrence of natural seams. This was the case at the tunnel excavated for the West Shore Railroad near the bank of the Hudson River under the Military Reservation of West Point. The time occupied and the cost of building this tunnel were greatly increased by this unexpected obstacle.

At other places soft material may be encountered, and the passage then is attended with great difficulty. Temporary supports, generally of timber, and of

* Reference is made to the substitution of locks in the Panama Canal for the original project of a canal at the sea-level.

great strength, have often to be used at every foot of progress to prevent the material from forcing its way into the excavation already made.

In long tunnels the ventilation is a difficult problem, although the use of compressed air drills has aided greatly in its solution.



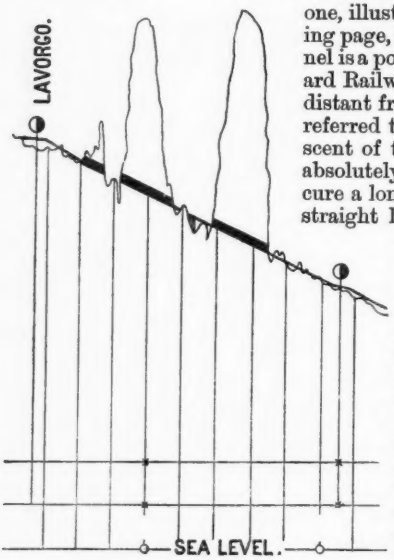
Plan of St. Gothard Spiral Tunnels.

Among the great tunnels which have been excavated the St. Gothard is the most remarkable. It is 9¼ miles long, with a section 26¼ feet wide by 19⅔ feet high. The work on this tunnel was continuous, and it required 9¼ years for its completion.

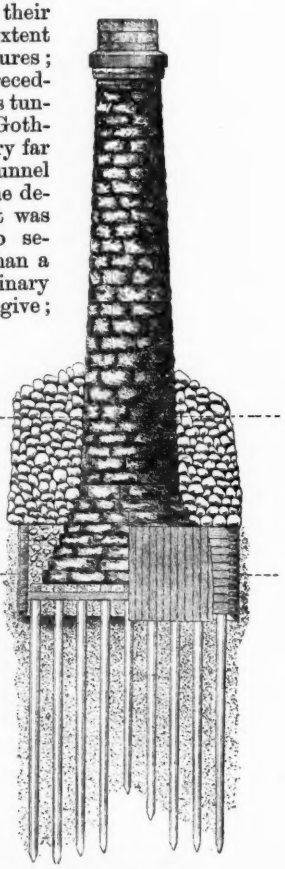
The Mont Cenis tunnel, 8½ miles in length, was completed in 12 years.

The Hoosac Tunnel, 4¾ miles in length, 26 feet wide and 21½ feet high, was not prosecuted continuously; it was completed in 1876.

These tunnels are notable chiefly on account of their great length; there are others of more moderate extent which have peculiar features; one, illustrated on the preceding page, is unique. This tunnel is a portion of the St. Gothard Railway, and not very far distant from the great tunnel referred to above. In the descent of the mountain it was absolutely necessary to secure a longer distance than a straight line or an ordinary curve would give; the line was therefore doubly curved upon itself. It enters the mountain at a high elevation, describes a circle through the rock and, constantly descending, reappears under itself at the side; still descending, it enters the mountain at another point and continues in another circular tunnel until it finally emerges again, under itself, but at a comparatively short horizontal distance from its first entry, having gained the required descent by a continued grade through the tunnels. The profile above shows the descent, upon a greatly reduced scale, the heavy lines marking where the line is in the tunnel.

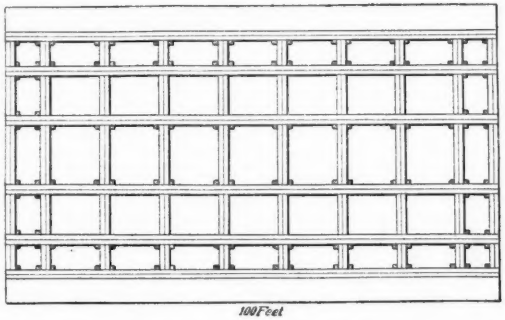


Profile of the Same.


Bridge Pier Founded on Piles.

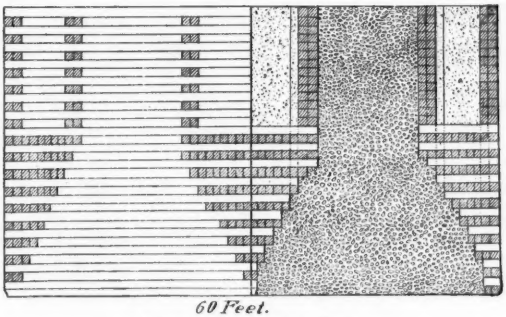
The remarkable success achieved by engineers in

securing suitable foundations at great depths is, of course, hardly known to the thousands who constantly see the structures supported on those foundations, but in any fair consideration of such engineering achievements this must not be omitted. The beautiful bridge built by Captain Eads over the Mississippi River at St. Louis, bold in its design and excellent in its execution, is an object of admiration to all who visit it, but the impression of its importance would be greatly magnified if the part below the surface of the water, which bears the massive towers, and which extends to a depth twice as great as the height of the pier above the water, could be visible.



Foundation Crib of the Poughkeepsie Bridge.

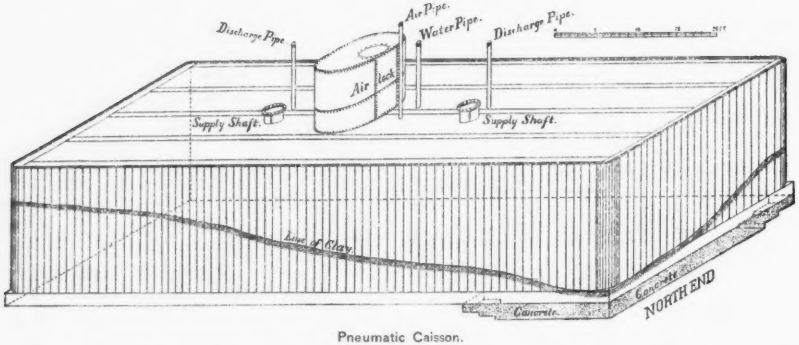
The simplest and most effective foundation is, of course, on solid rock. In many localities reliable foundations are built upon earth, when it exists at a suitable depth and of such a character as properly to sustain the weight. Foundations under water, when rock or good material occurs at moderate depth, are constructed frequently by means of the coffer-dam, which is simply an enclosure made water-tight and properly connected with the bottom of the stream. The water is then pumped out and the foundation and masonry built within this temporary dam. When the material is not of a character to sustain the weight, the next expedient is the use of piles, which are driven into the ground, often to a very considerable depth, and sustain the load placed upon them by the friction upon the sides of the piles of the material in which they are driven. It is seldom that dependence is placed upon the load being transferred from the top to the point of the pile, even though the point may have penetrated to a comparatively solid material. Wood is generally used for piles, and where the ground is permanently saturated there seems to be hardly any known limit to their durability. The substructure of foundations generally, where it is certain that they will always be in contact with water, can be, and generally is, of wood, and the permanency of such foundations is well established. An exception to this, however, occurs in salt-water, particularly in warmer countries, where the ravages of the minute *Teredo Navalis* and of the still more minute *Limnoria Terebrans* destroy the wood in a very short period of time. These insects, however, do not work below the ground-line or bed of the water. In many special cases hollow iron piles are used successfully.



Transverse Section of the Same.

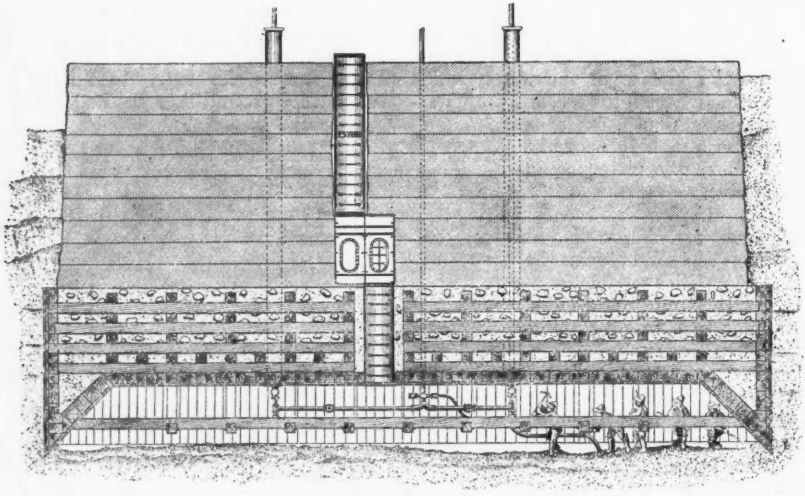
The ordinary method of forcing a pile into the ground is by repeated blows of a hammer of moderate weight; better success being obtained by frequent blows of the hammer, lifted to a slight

elevation, than results from a greater fall, there being danger also in the latter case of injuring the material of the pile.



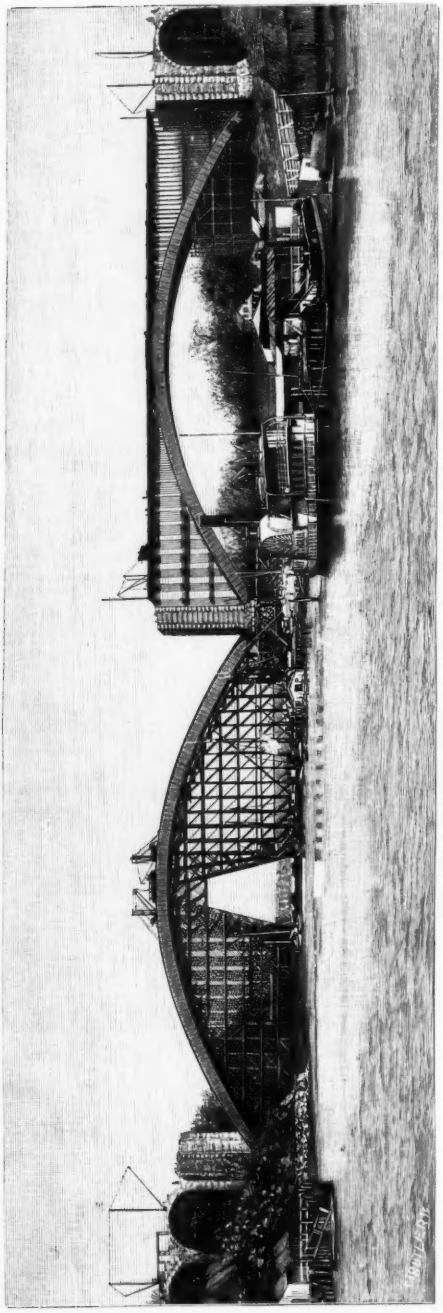
Pneumatic Caisson.

The use of the water jet for sinking piles, particularly in sand, is interesting. A tube, generally of ordinary gas-pipe, open at the lower end, is fastened to the pile; the upper end is connected by a hose to a powerful pump and, the pile being placed in position on the surface of the sand, water is forced through the tube and excavates a passage for the pile, which, by the application of very light pressure, descends rapidly to the desired depth. The stream of water must be continuous, as it rises along the side of the pile and keeps the sand in a mobile state. Immediately upon the cessation of pumping, the sand settles about the pile, and it is sometimes quite impossible to afterward move it. The water jet is used in sinking iron piles by conducting the water through the interior of the hollow pile and out of a hole at its point. The piles of the great iron pier at Coney Island were sunk with great celerity in this way. The illustration on page 14 shows one of



Transverse Section of Pneumatic Caisson.

At Work in a Pneumatic Caisson—Fifty feet below the Surface of the Water.



The 510-feet Span Steel Arches of the New Harlem River Bridge, New York.

the piers of a bridge founded upon wooden piling.

In many cases it would be impossible to drive piling in such a way as to insure the durability of the structure above it. This is particularly true of the foundations of structures crossing many of our rivers, where the bottom is of material which, in time of flood, sometimes scours to very remarkable depths; the material often being replaced when the flood has subsided. The expedient adopted is the pneumatic tube, or the caisson. Both are merely applications of the well-known principle of the diving-bell. In the former case hollow iron tubes, open at the bottom, are sunk to considerable depths, the water being expelled by air pumped into the tubes at a pressure sufficient to resist the weight of the water. Entrance to the tubes is obtained by an air-lock at the top, and the material is excavated from the inside, and sufficient weight placed upon the tube to force it gradually to the desired depth. When that depth is attained, the tubes are filled with concrete, and thus solid pillars of hydraulic concrete, surrounded by cast-iron tubing, are obtained.

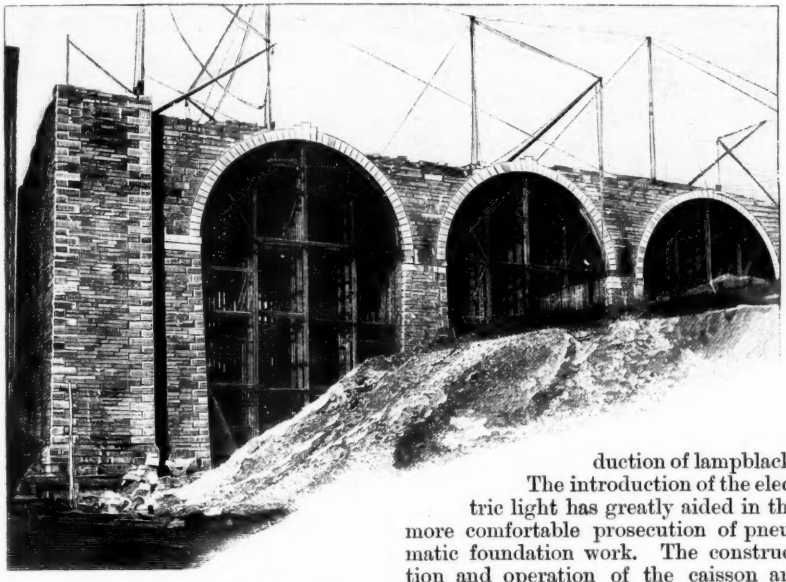
The pneumatic caisson is an enlargement of this idea of the diving-bell. The caisson is simply a great chamber or box, open at the bottom; the outside bottom edges are shod and cased with iron so as to give a cutting surface; the roof and sides are made of timber, thoroughly bolted together, and of such strength as to resist the pressure of the structure to be finally founded upon it. The chamber in the open bottom is of sufficient height to enable the laborers to work comfortably in it. This caisson is generally constructed upon the shore in the vicinity of the structure and towed to the point where the foundation is to be sunk. Air is supplied by power-

ful pumps and is forced into the working chamber. The pressure of the air of course increases constantly as the caisson descends; it must always be sufficient to overbalance the weight of the water and thus prevent the water from entering the chamber.

Descent to the caisson is made through a tube, generally of wrought iron, and having, at a suitable point, an air-lock, which is substantially an enlargement of the tube, forming a chamber, and of sufficient size to accommodate a number of men. This air-lock is provided with doors or valves at the top and at the bottom, both opening downward, and also with small tubes connecting the air-lock with the chamber below and with the external air above. Entrance to the caisson is effected through this air-lock. The lower door, or valve, being at the bottom, closes and is kept closed by the pressure of the air in the caisson below. After the air-lock is entered the upper door or valve is shut, and held shut a few moments, and the tube connecting with the outer air is closed; the small valve in the tube connecting with the caisson is then opened gradually and the pressure in the air-lock becomes the same as that in the chamber below; as soon as this is effected the valve, or door, at the bottom of the air-lock falls open and the air-lock becomes really a part of the caisson.

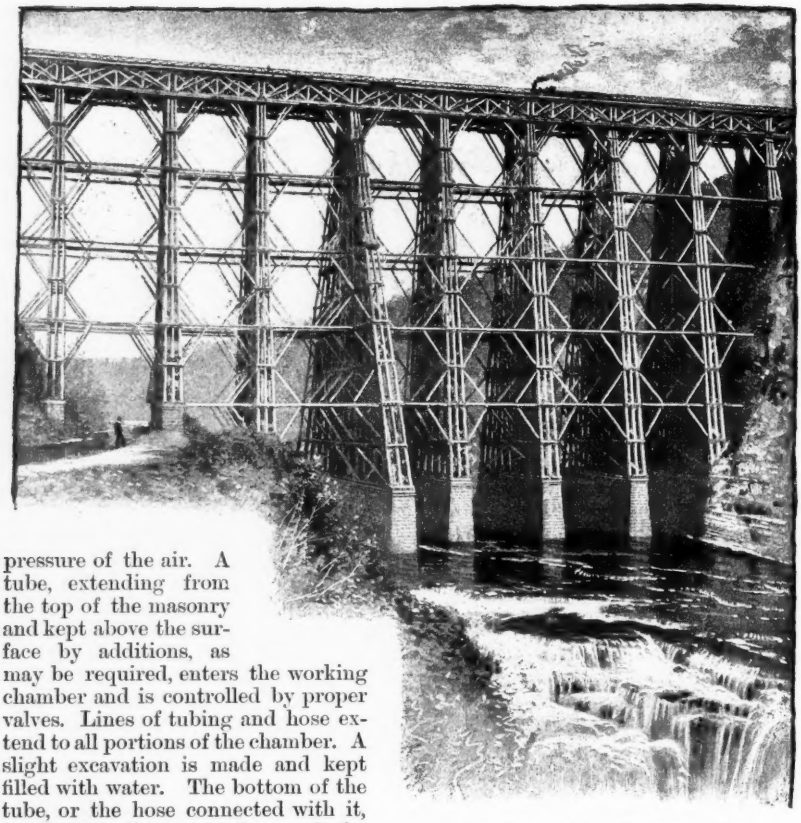
A sufficient force of men is employed in the chamber to gradually excavate the material from its whole surface and from under the cutting edge, and the masonry structure is founded upon the top of the caisson and built gradually, so as to give constantly a sufficient weight to carry the whole construction down to its final location upon the stable foundation, which may be the bed rock or may be some strata of permanent character.

The problem of lighting the chamber was until recently of considerable difficulty. The rapid combustion under great pressure made the use of lamps and candles very troublesome, particularly on account of the dense smoke and large production of lampblack. The introduction of the electric light has greatly aided in the more comfortable prosecution of pneumatic foundation work. The construction and operation of the caisson are illustrated on pages 16 and 17.



Granite Arched Approach to Harlem River Bridge.

The removal of rock, or any large mass, from the caisson is effected through the air-chamber; but the removal of finer material, as sand or earth, is accomplished by the sand pump or by the

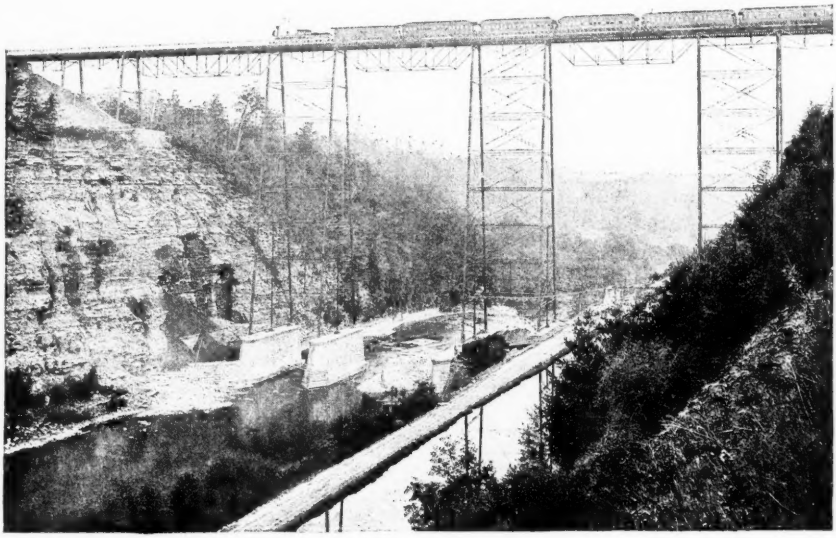


The Old Portage Viaduct, Erie Railway, N. Y.

pressure of the air. A tube, extending from the top of the masonry and kept above the surface by additions, as may be required, enters the working chamber and is controlled by proper valves. Lines of tubing and hose extend to all portions of the chamber. A slight excavation is made and kept filled with water. The bottom of the tube, or the hose connected with it, is placed in this excavation, and, the material being agitated so as to be in suspension in the water, the valve is opened, and the pressure of the air throws the water and the material held in suspension to the surface, through the tube, from the end of which it is projected with great velocity and may be deposited at any desired adjacent point. This method, however, exhausts the air from the caisson too rapidly for continuous service. The Eads sand-pump is therefore generally used. This is an ingenious apparatus, somewhat the same in principle as the injector which forces water into steam-boilers. A stream of water is thrown by a powerful pump through a tube which, at a point near the inlet for the excavated material, is enlarged so as to surround another tube. The water is forced upward with great velocity into the second tube, through a conical annular opening, and, expelling the atmosphere, carries with it to the surface a continuous stream of sand and water from the bottom of the excavation.

This system has been used successfully in the foundations of piers and abutments of bridges in all parts of the world. The rapidity of the descent of the caisson varies with the material through which it has to pass. The speed with which such foundations are executed is remarkable, when one remembers with what delicacy and intelligent supervision they have to be balanced and controlled. In some instances it has been necessary to carry them to great depths, one at St. Louis being 107 feet below ordinary water level in the river.

The pressure of air in caissons at these depths is very great; at 110 feet below the surface of the water it would be 50 pounds to the square inch. Its effect upon the men entering and working in the caisson has been carefully noted in various works, and these effects are sometimes very serious; the frequency of respiration is increased, the action of the heart becomes excited, and many persons become affected by what is known as the "caisson disease," which is accompanied by extreme pain and in many cases results in more or less complete paralysis. The careful observations of eminent physicians who have given this disease special attention have resulted in the formulation of rules which have reduced the danger to a minimum.



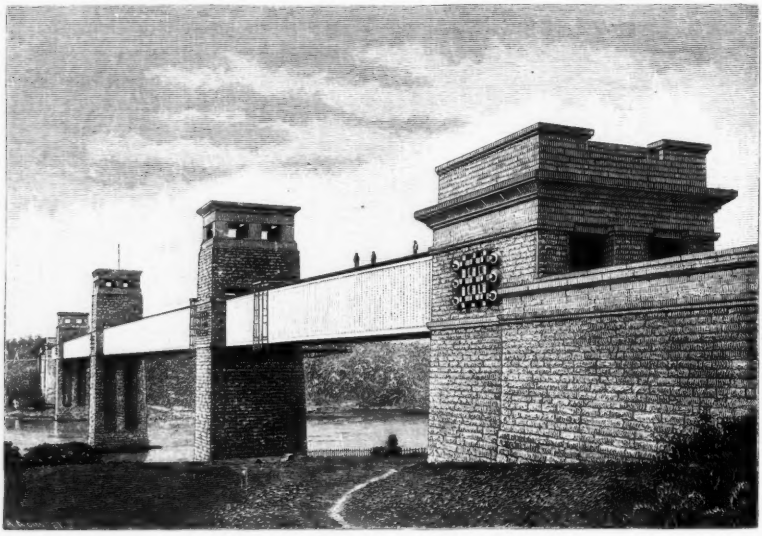
The New Portage Viaduct.

The execution of work within a deep pneumatic caisson is worth a moment's consideration. Just above the surface of the water is a busy force engaged in laying the solid blocks of masonry which are to support the structure. Great derricks lift the stones and lay them in their proper position. Powerful pumps are forcing air, regularly and at uniform pressure, through tubes to the chamber below. Occasionally a stream of sand and water issues with such velocity from the discharge pipe that, in the night, the friction of the particles causes it to look like a stream of living fire. Far below is another busy force. Under the great pressure and abnormal supply of oxygen they work with an energy which makes it impossible to remain there more than a few hours. The water from without is only kept from entering by the steady action of the pumps far above and beyond their control. An irregular settlement might overturn the structure. Should the descent of the caisson be arrested by any solid under its edge, immediate and judicious action must be taken. If the obstruction be a log, it must be cut off outside the edge and pulled into the chamber. Boulders must be undermined and often must be broken up by blasting. The excavation must be systematic and regular. A constant danger menaces the lives of these workers, and the wonderful success with which they have accomplished what they have undertaken is entitled to notice and admiration.

Another process, which has succeed-

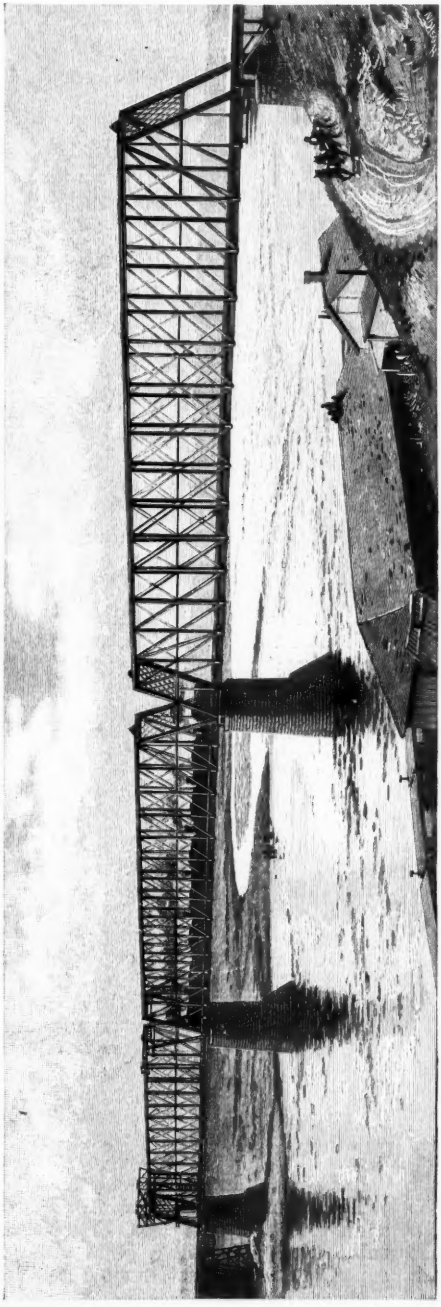
ed in carrying a foundation to greater depths than is possible with compressed air, is by building a crib or caisson, with chambers entirely open at the top, but having the alternate ones closed at the bottom and furnished with cutting edges. These closed chambers are weighted with stone or gravel until the structure rests upon the bottom of the river; the material is then excavated from the bottom through the open chambers, by means of dredges, thus permitting the structure to sink by its weight to the desired depth. When that depth is reached, the chambers which have been used for dredging are filled with concrete, and the masonry is constructed upon the top of this structure. The use of this system has enabled the engineer to place foundations deeper than has been accomplished by any other device, one recently built in Australia being 175 feet below the surface of the water. Illustrations on page 15 show this method of construction.

Even more remarkable than the pneumatic caisson is this method of sinking these great foundations. The removal of material must be made with such systematic regularity that the structure shall descend evenly and always maintain its upright position. The dredge is handled and operated entirely from the surface. The very idea is startling, of managing an excavation more than a hundred feet below the operator, entirely by means of the ropes which connect with the dredge, and doing it with such delicacy that the movement of an enormous structure, weighing many tons, is absolutely controlled. This is one of the latest and most interesting advances of engineering skill.



The Britannia Tubular Bridge over the Menai Straits, Wales.

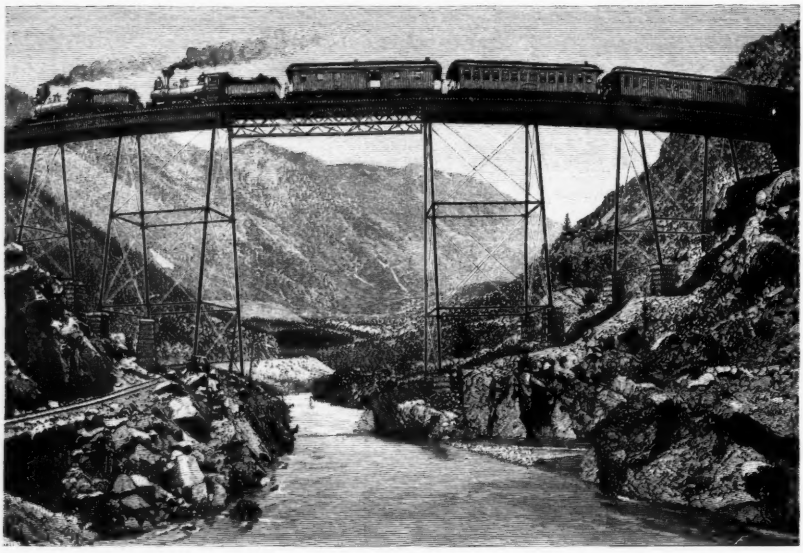
While it is true that the avoidance of large expenditure, when possible, is a mark of the best engineering, yet great structures often become absolutely necessary in the development of railway communication. Wide rivers must be crossed, deep valleys must be spanned, and much study has been given to the best methods of accomplishing these results. In the early history of railways in Europe substantial viaducts of brick and stone masonry were generally built; and in this country there are notable instances of such constructions. The approach to the depot of the Pennsylvania Railroad, in the city of Philadelphia,



Truss Bridge of the Northern Pacific Railway over the Missouri River at Bismarck, Dakota.—Testing the central span.

is an excellent example. Each street crossed by the viaduct is spanned by a bold arch of brick. Upon a number of our railways there are heavy masonry arches and culverts, and at some places these are of a very interesting character. The arches in the approach to the bridge over the Harlem Valley, now in construction, are shown on page 19. These are arches of granite, of a span of 60 feet. The illustration shows also the method of supporting the stone work of such arches during construction. Braced timbers form what is called the centre, and support the curved frame of plank upon which the masonry is built, which, of course, cannot be self-supporting until the keystone is in place; then the centre is lowered by a loosening of the wedges which support it, and the stone work of the arch is permitted to assume its final bearing. It is generally considered that where it is practicable to construct masonry arches under railways there is a fair assurance of their permanency, but some engineers of great experience in railway construction advance the theory that the constant jar and tremor produced by passing railway trains is really more destructive to masonry work than has been supposed, and that it may be true that the elements of the best economy will be found in metal structures rather than in masonry. It is true that repairs and renewals of metal bridges are much more easily accomplished than of masonry constructions.

In this country the wooden bridge has been an important, in fact an essential element in the successful building of our railways. At this moment the length of wooden bridges on the railway lines is very much greater than of metal. There have been a number of forms of wooden structure, but the Howe truss is, in many respects, the most per-

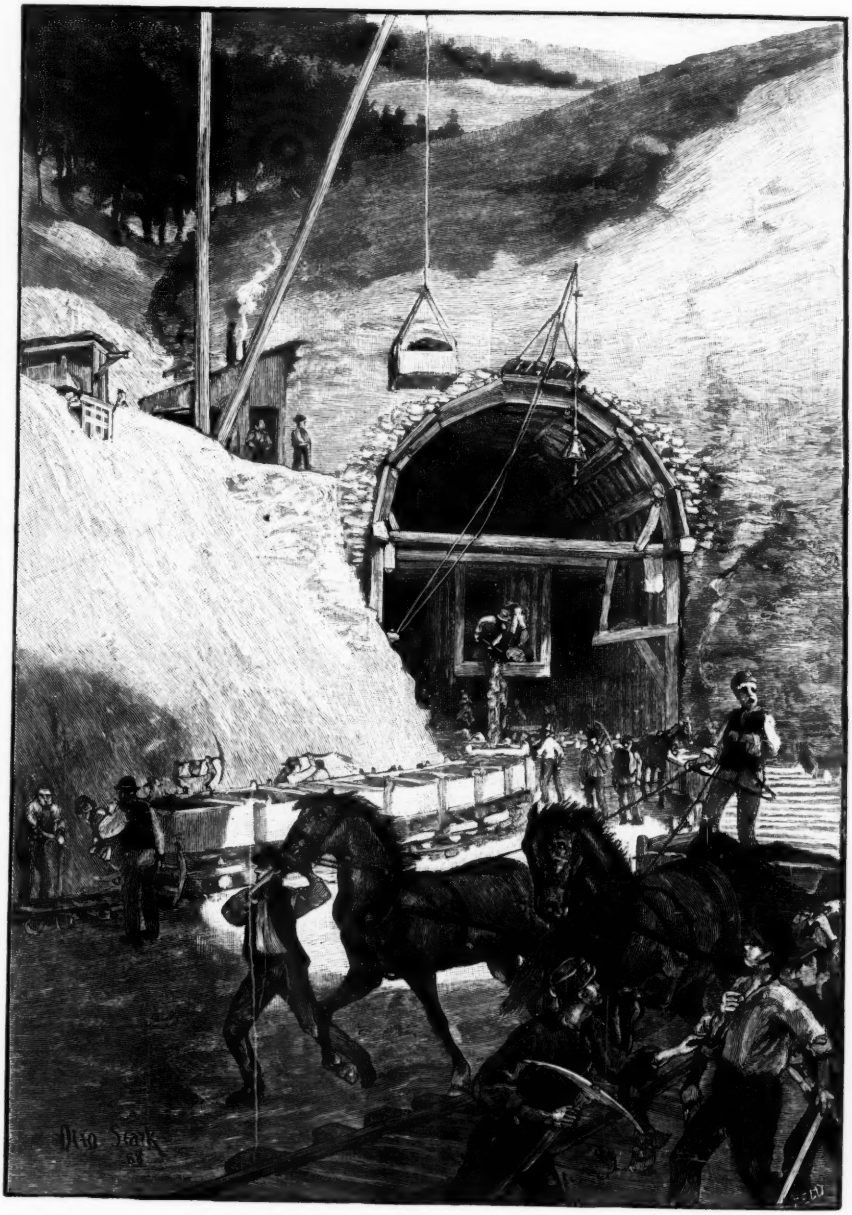


Curved Viaduct, Georgetown, Colorado; the Union Pacific crossing its own line.

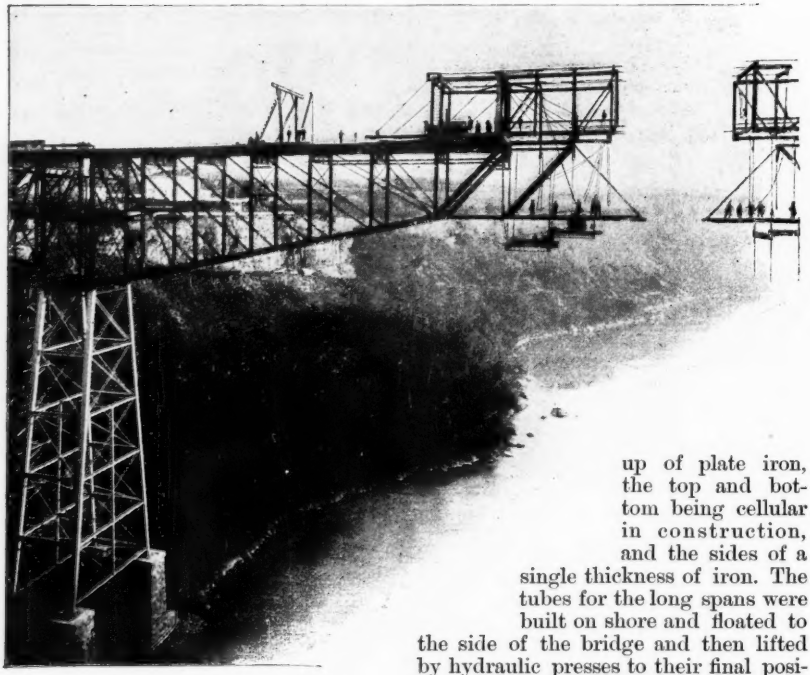
fect; its construction is simple, it has the minimum amount of metal, the vertical rods being of iron, the rest of the structure, with the exception of some of the angle blocks, bolts, nuts, etc., being entirely of wood. A bridge built by Mr. Howe in 1840, across the Connecticut River at Springfield, with seven spans of 180 feet each, was one of his first works. It lasted until 1853, when it was replaced by a Howe truss of more modern design, which was in good condition when, in 1874, it was replaced by a double-track iron bridge. This improved form of truss has held its place in public favor, and, where timber is convenient, is an economical bridge.

Timber is also used extensively in railroad construction in the form of trestles; one example of which has been alluded to on page 7. There were also constructed, years ago, some very bold viaducts in wood. One of the most interesting is shown on page 20, being the viaduct at Portage, N. Y. This construction was over 800 feet long, and 234 feet high from the bed of the river to the rail. The masonry foundations were 30 feet high, the trestles 190 feet, and the truss 14 feet; it contained more than a million and a half feet, board measure, of timber. The timber piers, which were 50 feet apart, are formed by three trestles, grouped together. It was framed so that defective pieces could be taken out and replaced at any time. This bridge was finished in 1852 and was completely destroyed by fire in 1875. The new metal structure which took its place is shown on page 21, and is an interesting example of the American method of metal viaduct construction, an essential feature of that construction being the concentration of the material into the least possible number of parts. This bridge has ten spans of 50 feet, two of 100 feet, and one of 118 feet. The trusses are of what is called the Pratt pattern, and are supported by wrought-iron columns, two pairs of columns forming a skeleton tower 20 feet wide and 50 feet long on the top. There are six of these towers, one of which has a total height from the masonry to the rail of 203 feet 8 inches. There are over 1,300,000 pounds of iron in this structure.

The fundamental idea of a bridge is a simple beam of wood. If metal is substituted it is still a beam with all superfluous parts cut away. This re-



Portal of a Tunnel in Process of Construction.

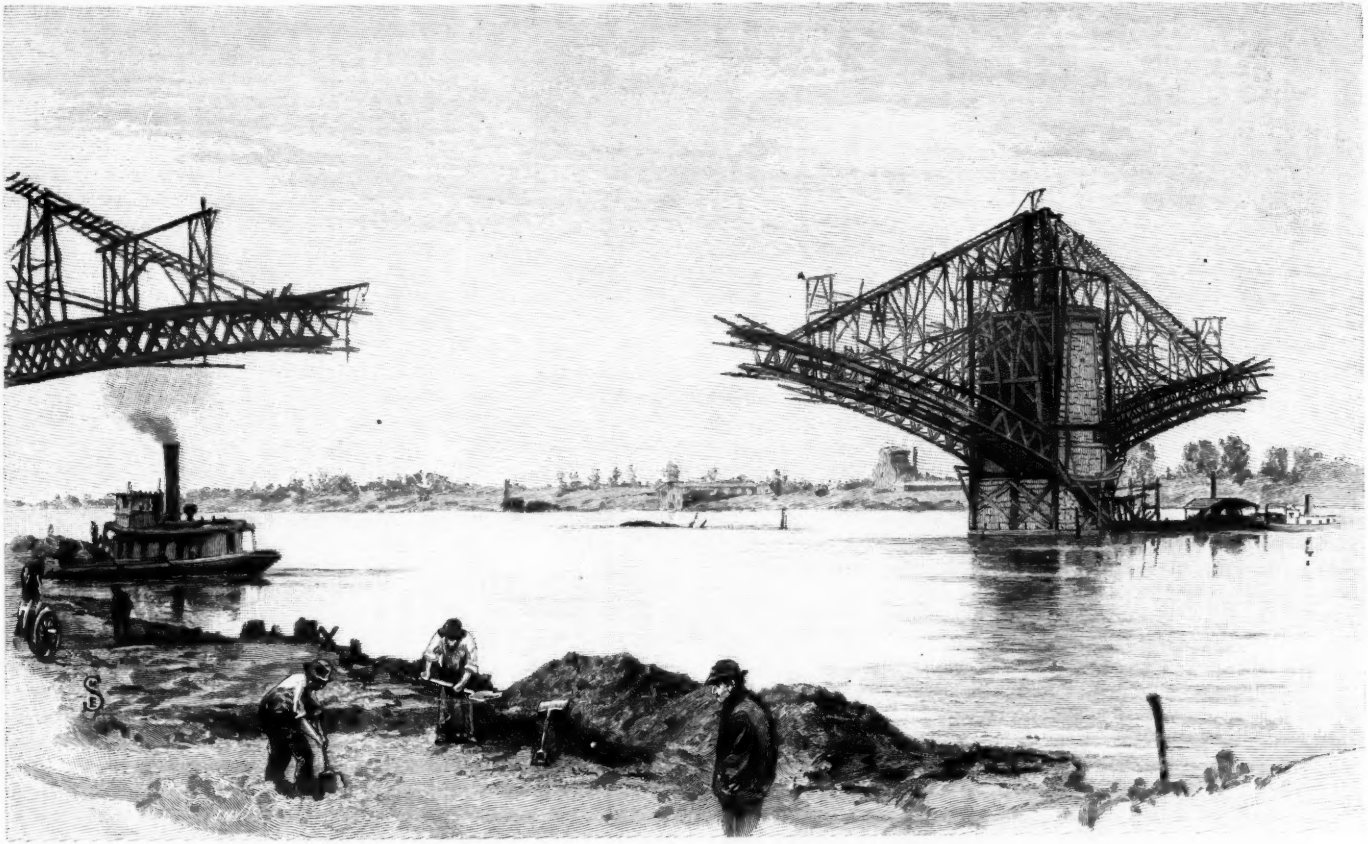


The Niagara Cantilever Bridge in Progress.

sults in what is called an I beam. When greater loads have to be carried, the I beam is enlarged and built up of metal plates rivetted together and thus becomes a plate girder. These are used for all short railway spans. For greater spans the truss must be employed.

Before referring, however, to examples of truss bridges, a description should be given of the Britannia Bridge, built by Robert Stephenson in 1850, over the Menai Straits. This construction carries two lines of rails and is built of two square tubes, side by side, each being continuous, 1,511 feet long, supported at each extremity and at three intermediate points, and having two spans of 460 feet each and two spans of 230 feet each. [P. 22.] The towers which support this structure are of very massive masonry, and rise considerably above the top of the tubes. These tubes are each 27 feet high and 14 feet 8 inches wide; they are built up of plate iron, the top and bottom being cellular in construction, and the sides of a single thickness of iron. The tubes for the long spans were built on shore and floated to the side of the bridge and then lifted by hydraulic presses to their final position. The rapid current, and other considerations, made the erection of false works for these spans impracticable. The beautiful suspension bridge, built by Telford in 1820, over the Menai Straits, is only a mile away from this Britannia Bridge, but, at the time of the construction of the latter, it was not deemed possible by English engineers to erect a suspension bridge of sufficient strength and stability to accommodate railway traffic.

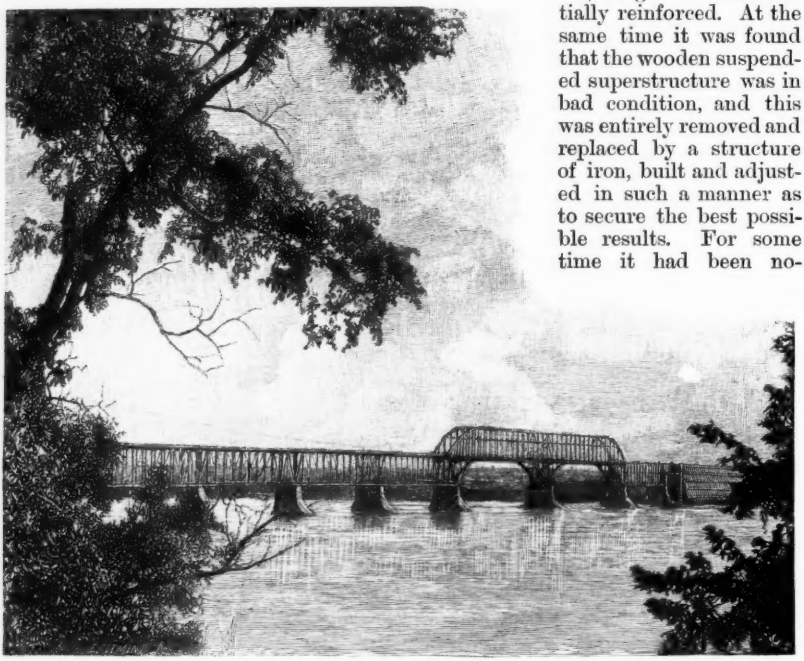
The Victoria Bridge at Montreal is of the same general character of construction as the Britannia Bridge, but is built only for a single line of rails; this bridge also was built by Mr. Stephenson, in 1859. These two structures were enormous works; their strength is undoubted, but they lacked that element of permanent economy which has been spoken of in this article; their cost was very great and the expense of maintenance is also very great. A very large amount of rust is taken from these tubes every year; they require very frequent painting, and there



The St. Louis Bridge during Construction.

are on the Victoria Bridge 30 acres of iron surface to be painted.

A remarkable and interesting contrast to these heavy tubes of iron is the Niagara Falls railway suspension bridge,



The Lachine Bridge, on the Canadian Pacific Railway, near Montreal, Canada.

completed in March, 1855. The span of this bridge is 821 feet, and the track is 245 feet above the water surface. It is supported by 4 cables which rested on the tops of two masonry towers at each end of the central span, the ends of the cables being carried to and anchored in the solid rock. The suspended superstructure has two floors, one above the other, connected together at each side by posts and truss rods, inclined in such a manner as to form an open trussed tube, not intended to support the load, but to prevent excessive undulations. The floors are suspended from the cables by wire ropes, the upper floor carrying the railroad track, and the lower forming a foot and carriage way. Each cable has 3,640 iron wires. This bridge carried successfully a heavy traffic for 26 years; it was then found that some repairs to the cable were required at the anchorage, the portions of the cables exposed to the air being in excellent condition. These repairs were made, and the anchorage was substantially reinforced. At the same time it was found that the wooden suspended superstructure was in bad condition, and this was entirely removed and replaced by a structure of iron, built and adjusted in such a manner as to secure the best possible results. For some time it had been noticed that the stone towers which supported the great cables of the bridge showed evidences of disintegration at the surface, and a careful engineering examination in 1885 showed that these towers were in a really dangerous condition. The reason for this was that the saddles over which the cables pass on the top of the towers had not the freedom of motion which was required for the action of the cables, caused by differences of temperature and by passing loads. These saddles had been placed upon rollers but, at some period, cement had been allowed to be put between these rollers, thus preventing their free motion. The result was a bending strain upon the towers which was too great for the strength and cohesion of the stone. A most interesting

and successful feat was accomplished in the substitution of iron towers for these stone towers, without interrupting the traffic across the bridge. This has been accomplished very recently by building a skeleton iron tower outside of the stone tower, and transferring the cables from the stone to the iron tower by a most ingenious arrangement of hydraulic jacks. The stone towers were then removed. Thus, by the renewal of its suspended structure and the replacing of its towers, the bridge has been given a new lease of life and is in excellent condition to-day. [P. 33.]

This Niagara railway suspension bridge has been so long in successful operation that it is difficult now to appreciate the general disbelief in the possibility of its success as a railway bridge, when it was undertaken. It was projected and executed by the late John A. Roebling. Before it was finished, Robert Stephenson said to him, "If your bridge succeeds, mine is a magnificent blunder." The Niagara bridge did succeed.

We are so familiar with the great suspension bridge between New York and Brooklyn [frontispiece], that only a simple statement of some of its characteristic features will be given. Its clear span is 1,595½ feet. With its approaches its length is 3,455 feet. The clear waterway is 135 feet high. The towers rise 272 feet above high water and extend on the New York side down to rock 78 feet below. The four suspension cables are of steel wire and support six parallel steel trusses, thus providing two carriage ways, two lines of railway, and one elevated footway. The cables are carried to bearing anchorages in New York and in Brooklyn. The cars on the bridge are propelled by cables, and the amount of travel is now so great as to demand some radical changes in the methods for its accommodation, which a few years ago were supposed to be ample.

Except under special circumstances of location or length of span, the truss bridge is a more economical and suitable structure for railway traffic than a suspension bridge. Reference has been made to the excellent wooden trusses which have for so many years done good service in every part of the country. The material of course is perishable, although the life of some of these well-built wooden trusses is wonderfully long. The great danger is from fire—and as the traffic on a road increases that danger becomes greater.

The advance from the wood truss to the modern steel structure has been through a number of stages. Excellent bridges were built in combinations of wood and iron, and are still advocated where wood is inexpensive. Then came the use of cast iron for those portions of the truss subject only to compressive strains, wrought iron being used for all members liable to tension. Many bridges of notable spans were built in this way and are still in use. The form of this combination truss varied with the designs of different engineers, and the spans extended to over three hundred feet. The forms bore the names of the designers, and the Fink, the Bollman, the Pratt, the Whipple, the Post, the Warren, and others had each their advocates. The substitution of wrought for cast iron followed, and until quite recently trusses built entirely of wrought iron have been used for all structures of great span. The latest step has been made in the use of steel, at first for special members of a truss and latterly for the whole structure. The art of railway bridge building has thus, in a comparatively few years, passed through its age of wood, and then of iron, and now rests in the application of steel in all its parts.

Two distinct ways of connecting the different parts of a structure are in common use, riveting and pin connections.

In riveted connections the various parts of the bridge are fastened at all junctions by overlapping the plates of iron or steel and inserting rivets into holes punched through all the plates to be connected. The rivets are so spaced as to insure the best result as to strength. The pieces of metal are brought together, either in the shop or at the structure during erection, and the rivets, which are round pieces of metal with a head formed on one end, are heated and inserted from one side, being made long enough to project sufficiently to give the proper amount of metal for forming the other head. This is done while the rivet is still hot, either by hammering or by the application of a

riveting machine, operated by steam or hydraulic pressure. Ingenious portable machines are now manufactured which are hung from the structure during erection and connected by flexible hose with the steam power, by the use of which the rivet heads can be formed in place with great celerity. The connections of plates by rivets of proper dimensions and properly spaced give great strength and stiffness to such joints.

In pin connections the members of a structure are assembled at points of junction and a large iron or steel pin inserted in a pin-hole running through all the members. This pin is made of such diameter as to withstand and properly transmit all the strains brought upon it. Joints made with such pin connections have flexibility, and the strains and stresses can be calculated with great precision. Eye-bars are forged pieces of iron or steel, generally flat, and enlarged at the ends so as to give a proper amount of metal around the pin-hole or eye, formed in those ends.

Structures connected by pins at their principal junctions have, of course, many parts in which riveting must be used.

The elements which are distinctively American in our railway bridges are the concentration of material in few members and the use of eye-bars and pin connections in place of riveted connections. The riveted methods are, however, largely used in connection with the American forms of truss construction.

An excellent example of an American railway truss bridge is shown on page 23. This structure spans the Missouri River at its crossing by the Northern Pacific Railroad. It has three through spans of 400 feet each and two deck spans of 113 feet each. The bottom chords of the long spans are 50 feet above high water, which at this place is 1,636 feet above the level of the sea. The foundations of the masonry piers were pneumatic caissons. The trusses of the through spans, 400 feet long, are 50 feet deep and 22 feet between centres. They are divided into 16 panels of 25 feet each. The truss is of the double system Whipple type with inclined end posts. The bridge is proportioned to carry a train weighing 2,000 pounds per lineal foot, preceded by two locomotives weighing 150,000 pounds in a length of 50 feet. The pins connecting the members of the main truss are 5 inches in diameter.

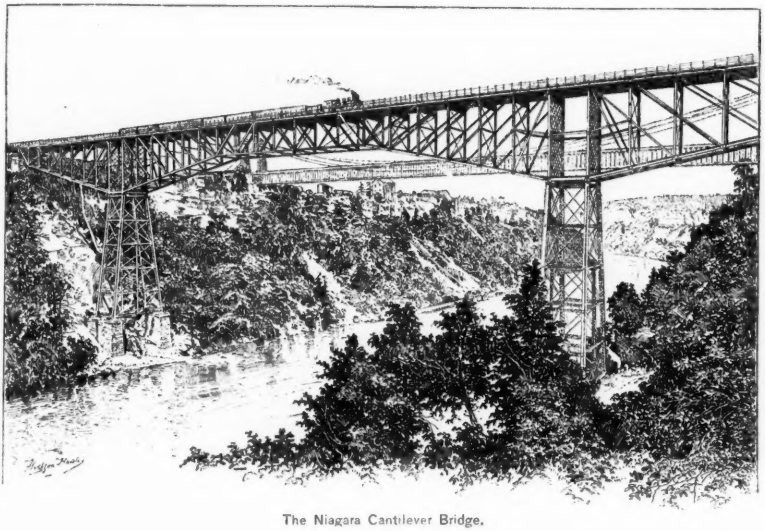
This bridge is a characteristic illustration of the latest type of American methods. The extreme simplicity of its lines of construction, the direct transfer of the strains arising from loads, through the members, to and from the points where those strains are concentrated in the pin connections at the ends of each member, are apparent even to the untechnical eye. The apparent lightness of construction arising from the concentration of the material in so small a number of members, and the necessarily great height of the truss, give a grace and elegance to the structure and suggest bold and fine development of the theories of mechanics.

An interesting structure is that shown on page 24, where the railway crosses its own line on a curved truss.

The truss bridges which have been mentioned as types of the modern railway bridge are erected by the use of false works of timber, placed generally upon piling or other suitable foundation, between the piers or abutments, and made of sufficient strength to carry each span of the permanent structure until it is completed and all its parts connected, or, as is technically said, until the span is swung. Then the false works are removed and the span is left without intermediate support. But there are places where it would be impossible or exceedingly expensive to erect any false works. A structure over a valley of great depth, or over a river with very rapid current, are instances of such a situation.

A suspension bridge would solve the problem, but in many cases not satisfactorily. The method adopted by Colonel C. Shaler Smith at the Kentucky River Bridge [p. 9] shows ingenuity and boldness worthy of special remark. The Cincinnati Southern Railroad was here to cross a cañon 1,200 feet wide and 275 feet deep. The river is subject to freshets every two months, with a range of 55 feet and a known rise of 40 feet in a single night. Twenty years before, the towers for a sus-

pension bridge had been erected at this point. The design adopted for the railroad bridge was based upon the cantilever principle. The structure has three spans of 375 feet each, carrying a railway track at a height of 276 feet above the bed of the river. At the time of its construction this was the highest railway bridge in the world, and it is still the highest structure of the kind with spans of over 60 feet in length. The bridge is supported by the bluffs at its ends and by two intermediate iron piers resting upon bases of stone masonry. Each iron pier is 177 feet high, and consists of four legs, having a base of $71\frac{1}{2} \times 28$ feet, and terminating at its top in a turned pin 12 inches in diameter under each of the two trusses. Each iron pier is a structure complete in itself, with provision for expansion and contraction in each direction through double roller beds interposed between it and the masonry, and is braced to withstand a gale of wind that would blow a loaded freight-train bodily from the bridge.



The Niagara Cantilever Bridge.

The trusses were commenced by anchoring them back to the old towers, and were then built out as cantilevers from each bluff to a distance of one-half the length of the side spans, and at this point rested upon temporary wooden supports. From thence they were again extended as cantilevers until the side spans were completed and rested upon the iron piers. This cantilever principle is simply the balancing of a portion of the structure on one side of a support by the portion on the opposite side of the same support. Similarly the halves of the middle span were built out from the piers, meeting with exactness in mid-air. The temporary support used first at the centre of one side span and then at the other, was the only scaffolding used in erecting the structure, none whatever being used for the middle span.

When the junction was made at the centre of the middle span, the trusses were continuous from bluff to bluff, and, had they been left in this condition, would have been subjected to constantly varying strains resulting from the rise and fall of the iron piers due to thermal changes. This liability was obviated by cutting the bottom chords of the side spans and converting them into sliding joints at points 75 feet distant from the iron piers. This done, the bridge consists of a continuous girder 525 feet

long, covering the middle span of 375 feet, and projecting as cantilevers for 75 feet beyond each pier, each cantilever supporting one end of a 300-foot span, which completes the distance to the bluff on each side.

A most interesting example of cantilever construction is the railway bridge recently built at Niagara, only a few rods from the suspension bridge and a short distance below the great falls. It is shown in the illustrations on pages 26 and 31. The floor of the bridge is 239 feet above the surface of the water, which at that point has a velocity in the centre of 16½ miles per hour and forms constant whirlpools and eddies near the shores. The total length of the structure is 910 feet, and the clear span over the river between the towers is 470 feet. The shore arms of the cantilever, that is to say, those portions of the structure which extend from the top of the bank to the top of the tower built from the foot of the bank, are firmly anchored at their shore ends to a pier built upon the solid rock. These shore arms were constructed on wooden false works, and serve as balancing weights to the other or river arms of the lever, which project out over the stream. These river arms were built by the addition of metal, piece by piece, the weight being always more than balanced by the shore arms. The separate members of the river arms were run out on the top of the completed part and then lowered from the end by an overhanging travelling derrick and fastened in place by men working upon a platform suspended below [see p. 26]. This work was continued, piece by piece, until the river arm of each cantilever was complete, and the structure was then finished by connecting these river arms by a short truss suspended from them directly over the centre of the stream. This whole structure was built in eight months, and is an example both of a bold engineering work and of the facility with which a pin-connected structure can be erected. The materials are steel and iron. The prosecution of this work by men suspended on a platform, hung by ropes from a skeleton structure projecting, without apparent support, over the rushing Niagara torrent, was always an interesting and really thrilling spectacle.

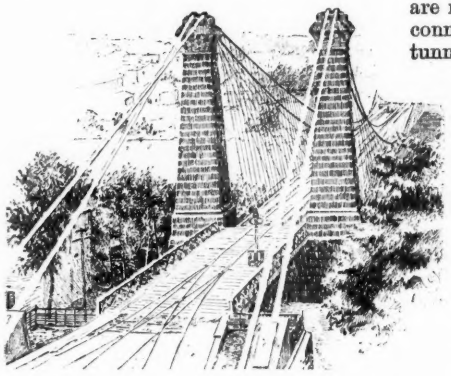
The Lachine Bridge just built over the St. Lawrence near Montreal [p. 28] has certain peculiar features. It has a total length of 3,514 feet. The two channel spans are each 408 feet in length and are through spans. The others are deck spans. Through spans are those where the train passes between the side trusses. Deck spans are those where the train passes over the top of the structure. These two channel spans and the two spans next them form cantilevers, and the channel spans were built out from the central pier and from the adjacent flanking spans without the use of false works in either channel. A novel method of passing from the deck to the through spans has been used, by curving the top and bottom chords of the channel spans to connect with the chords of the flanking spans. The material is steel.

This structure, light, airy, and graceful, forms a strong contrast to the dark, heavy tube of the Victoria Bridge just below.

The enormous proposed cantilever Forth Bridge, with its two spans of 1,710 feet each, is in steady progress of construction and will when completed mark a long step in advance in the science of bridge construction.

Of entirely different design and principle from all these trusses are the beautiful steel arches of the St. Louis Bridge [p. 27], the great work of that remarkable genius, James B. Eads. This structure spans the Mississippi at St. Louis. Difficult problems were presented in the study of the design for a permanent bridge at that point. The river is subject to great changes. The variation between extreme low and high water has been over 41 feet. The current runs from 2¾ to 8½ miles per hour. It holds always much matter in suspension, but the amount so held varies greatly with the velocity. The very bed of the river is really in constant motion. Examination by Captain Eads in a diving bell showed that there was a moving current of sand at the bottom, of at least three feet in depth. At low water, the velocity of the stream is small and the

bottom rises. When the velocity increases, a "scour" results and the river-bed is deepened, sometimes with amazing rapidity. In winter the river is



Old Stone Towers of the Niagara Suspension Bridge.

closed by huge cakes of ice from the north, which freeze together and form great fields of ice.

It was decided to be necessary that the foundations should go to rock, and they were so built. The general plan of the superstructure, with all its details, was elaborated gradually and carefully, and the result is a real feat of engineering. There are three steel arches, the centre one having a span of 520 feet and each side arch a span of 502 feet. Each span has four parallel arches or ribs, and each arch is composed of two cylindrical steel tubes, 18 inches in exterior diameter, one acting as the upper and the other as the lower chord of the arch. The tubes are in sections, each about twelve feet long, and connected by screw joints. The thickness of the steel forming the tubes runs from $1\frac{3}{16}$ to $2\frac{1}{8}$ inches. These upper and lower tubes are parallel and are 12 feet apart, connected by a single system of diagonal bracing. The double tracks of the railroad run through the bridge adjacent to the side arches at the elevation of the highest point of the lower tube. The carriage road and footpaths extend the full width of the bridge and are carried, by braced vertical posts, at an elevation of twenty-three feet above the railroad. The clear headway is 55 feet above ordinary high water. The approaches on each side are masonry viaducts, and the railway connects with the City Station by a tunnel nearly a mile in length. The illustration shows vividly the method of erection of these great tubular ribs. They were built out from each side of a pier, the weight on one side acting as a counterpoise for the construction on the other side of the pier. They were thus gradually and systematically projected over the river, without support from below, till they met at the middle of the span, when the last central connecting tube was put in place by an ingenious mechanical arrangement, and the arch became self-supporting.

The double arch steel viaduct now in process of erection over the Harlem Valley in the city of New York [p. 18] has a marked difference from the St. Louis arches in the method of construction of the ribs. These are made up of immense voussoirs of plate steel, forming sections somewhat analogous to the ring stones of a masonry arch. These

The New Iron Towers of the Same

sections are built up in the form of great I beams, the top and bottom of the I being made by a number of parallel steel plates connected by angle pieces with

the upright web, which is a single piece of steel. The vertical height of the I is 13 feet. The span of each of these arches is 510 feet. There are six such parallel ribs in each span, connected with each other by bracing. These great ribs rest upon steel pins of 18 inches diameter, placed at the springing of the arch. The arches rise from massive masonry piers, which extend up to the level of the floor of the bridge. This floor is supported by vertical posts from the arches and is a little above the highest point of the rib. It is 152 feet above the surface of the river—having an elevation fifty feet greater than the well-known High Bridge, which spans the same valley within a quarter of a mile. The approaches to these steel arches on each side are granite viaducts carried over a series of stone arches. The whole structure will form a notable example of engineering construction. It will be finished within two years from the beginning of work upon its foundations, the energy of its builders being worthy of special commendation.

In providing for the rapid transit of passengers in great cities the two types of construction successfully adopted are represented by the New York Elevated and the London Underground railways. The New York Elevated is a continuous metal viaduct, supported on columns varying in height so as to secure easy grades. The details of construction differ greatly at various parts of the elevated lines, those more recently built being able to carry much heavier trains than the earlier portions. The roads have been very successful in providing the facilities for transit so absolutely necessary in New York. The citizens of that city are alive to the present necessity of adding very soon to those facilities, and it is now only a question of the best method to be adopted to secure the largest results in a permanent manner.

The London Underground road has also been very successful. Its construction was a formidable undertaking. Its tunnels are not only under streets but under heavy buildings. Its daily traffic is enormous. The difficult question in its management is, as in all long tunnels, that of ventilation, but modern science will surely solve that, as it does so many other problems connected with the active life of man.

Many broad questions of general policy, and innumerable matters of detail are involved in the development of railway engineering. In the determination, for instance, of the location, the relations of cost and construction to future business, the possibilities of extensions and connections, the best points for settlements and industrial enterprises, the merits and defects of alternative routes must be weighed and decided.

Where structures are to be built, the amount and delicacy of detail requisite in their design and execution can hardly be described. Final pressures upon foundations must be ascertained and provided for. Accurate calculations of strains and stresses, involving the application of difficult processes and mechanical theories, must be made. The adjustment of every part must be secured with reference to its future duty. Strength and safety must be assured and economy not forgotten. Every contingency must, if possible, be anticipated, while the emergencies which arise during every great construction demand constant watchfulness and prompt and accurate decision.

The financial success of the largest enterprises rests upon such practical application of theory and experience. Even more weighty still is the fact that the safety of thousands of human lives depends daily upon the permanency and stability of railway structures. Such are some of the deep responsibilities which are involved in the active work of the Civil Engineer.

DEATH AND JUSTICE.

By Graham R. Tomson.

DEATH doth not claim us with the passing breath;
Before our Lady Justice calm he stands
To hear her grave, immutable commands;
"Wait, I shall tell you presently," she saith,
"Wait but a moment's space, my brother, Death,
While Time, our kinsman, shakes his silent sands."
She holds the balance true, with steady hands
And strong, the little while it wavereth.

Hatred and Envy must lie still and wait,
So, now, must Love and Sorrow stand aside
In breathless silence, pale and eager-eyed,
Till, through the lips of Justice, speaketh Fate,—
"Death, in thy keeping must the man abide;"
Or, "He shall live for aye,—his work is great."

MAESTRO AMBROGIO.

By T. R. Sullivan.

IN a certain narrow street of Florence, near Andrea del Sarto's house and the Annunziata's choir, where with maimed rites the mortal part of the poor painter *senza errore* was hurried under the pavement, there lived in the latter half of the fifteenth century a learned doctor whose name and titles history is scarcely able to recall. Yet the young Andrea may have known him; and the illustrious Leonardo, called Da Vinci, wise in many things and ennobling all with a touch rarer than the golden one of fable, was surely numbered among his friends. But the doctor led a life of deep seclusion, indifferent to the storms of party strife, to plot and insurrection, battles and murders, the tyrant's yoke, the tyrant's favor. His four gray walls sheltered him from the summer's heat, the winter's cold; his little garden caught from the sunlight all the colors of the prism in roses, wild pomegranates, and oleanders. The laboratory behind it held his store of manuscripts, his retorts and crucibles, his furnace and his bellows—all the apparatus needed for experiments which so absorbed him that he seldom went out into the bustling streets. He had but one thought, one purpose: to make some vast discovery which should benefit the human race; and as he was human, too, one may imagine that his ambition went a little farther, coupling with the glorious result his own name, and immortalizing that. Undoubtedly, he longed and hoped to live forever in men's hearts; to have his ashes consecrated in a gilded shrine, surmounted by a marble bust—a goal of pilgrimage. Alas! None knows where he lies buried. You may find his house to-day in the Via del Mandorlo; his laboratory has been turned into a stable; the roses still run riot in his garden, and the snails still nibble at their leaves; but the last of many tenants, treading the very paths he trod, will smile and tell you that the

property has been in his own family from time immemorial, and that no such man ever lived and died there as Maestro Ambrogio.

He was a bachelor, of course, and had come to that time of life when a man is neither young nor old, and when a few additional years work little change in him. His figure was slender and well-proportioned; but his shoulders had the scholar's stoop, his thin face the hungry look of an ascetic; the bright blue eyes in it seemed younger than the rest of him; for, contrary to all custom of the day, he went unshorn and unshaven, and his brown hair, streaked with gray, mingled with the untrimmed beard that swept over his breast, muffling him like a disguise. He wore habitually the Florentine *lucco*, or long robe of black serge, familiar to the world through Dante's portraits; and, with this, the hood-like civic bonnet of the same material. These garments, in spite of his absorbing pursuits, were always of the most scrupulous neatness; while his hands were marvellously white and slender, fine, delicate, like the hands of a noble. But the man's nobility of nature found its best expression in his voice, which was low and clear, never querulous, never raised in anger, of surpassing gentleness and patience in all its tones; so that he who heard it for the first time stood spell-bound in respectful silence, as though the speech were half divine, and its simple phrases the utterance of an oracle.

Few, however, beyond the narrow limits of his household, ever heard the voice of Maestro Ambrogio. His one servant, an old peasant woman from the mountains of the Mugello, stood between him and all the cares and worries of the outer world. Monna Modesta was well known in the quarter. It was she who went to market for him, who knew the worth of a plump fowl, and was ready to pay just that and no more; above all, who kept her master's house in the wonderful and incredible state of cleanliness, noted in chronicles of the time. But only the house; she was never allowed to pass beyond the garden, to profane the dust of the laboratory with her vulgar hands. This, to one of her instincts, was a positive and constant grief. With tears in her eyes she bade the saints witness that her master's good was all she had at heart, and that dust was the insidious foe of all mankind. Yet Maestro Ambrogio remained a very pig for obstinacy, as she declared. The laboratory and its contents were never to be touched; he, and his young pupil, the noble signor Gentile Morelli alone could enter it; even its small windows, high above her head, must not be scoured. This last command was hardly to be borne, and for a time she persistently disobeyed it; climbing the trellis in her master's absence, removing dead leaves from the sills, polishing the leaded panes; and since she could not open them, peering within, defiantly, upon a group of broken jars stored away on a neglected shelf and half buried in cobwebs, through which the wicked old spiders eyed her with indifference. Beyond these evidences of pestilential disorder she saw dimly, in the feeble glow of the furnace, a confusion of utensils whose very names were unknown to her. And one day, when there was more light than usual, she also discerned the outlines of a splendid alabaster chest, of great size and carved in high relief, but sadly stained and blackened. In her simple ignorance she took this for a linen-coffer, and longed to have it removed and cleansed and restored to its proper uses under her careful supervision. The good soul little dreamed that this sculptured wonder had been designed merely to hold what she most despised—namely, dust. For it was an Etruscan sarcophagus, found long ago by her master in his mountain vineyard near Gubbio; and by him brought down to Florence with reverent care, for the sake of its principal figure—a young girl, recumbent in the marble, but life-like, as if a touch would rouse her—the portrait, no doubt, of the dead unknown whose ashes Maestro Ambrogio still treasured, undisturbed.

Monna Modesta, wise in her small way, applied to herself that proverb of her nation, which prizes the ounce of discretion above the pound of knowledge. As a matter of course, she gave her master no cause to suspect that she had climbed the trellis to look upon these things, prudently resolving to pry

into them no more. But she continued to sound the praises of order and her own devotion to it, on all possible occasions; with righteous thanks that she was not as others were, uplifting her standard at the gate of the enemy's citadel, to wage fierce warfare upon the insects of the garden, where not so much as a leaf was permitted to fall unnoted: while the student, Gentile, having daily access to the precincts from which she was so rigorously excluded, daily grew in her disfavor. She looked upon him as a poor, misguided creature, aiding and abetting her master in practices that were, to say the least, unwholesome, and that did no good to anybody, so far as honest folk could see.

Toward the close of a lovely day when the long Italian summer was nearly gone, Monna Modesta sat spinning and considering deeply many things. She had moved her wheel into a sunny corner of the garden, and the grateful warmth reminded her that winter was not far off, and that winter, at her age, was to be dreaded. She must go to market in the morning and get the better of old Niccolò, who was a rascal at heart and would cheat her if he could. The thought caused her wheel to rattle angrily. The world's prevailing wickedness made duty doubly hard; the wicked seemed to thrive and flourish, while, for the good, life was a long contention, with palsy at the end. The breeze shook down some dead leaves from the rose trained above her head. Yes, autumn had already come; and what would befall her master if the winter should be her last? He could never take care of himself, he must inevitably become the prey of thieves. She sighed, and the wheel stopped turning; the dry leaves rustled under foot, but she did not stoop for them.

A key grated in the lock of the laboratory door. The sound passed unheeded, and her master's presence was first made known to her by his shadow on the garden-path. The wheel resumed its work, but quite unconsciously she sighed again.

"Why do you sigh, my good Modesta?" asked Maestro Ambrogio.

"The winter is at hand, my master. I feel its breath already, and I am old."

"*Madre mia,* with such nimble fingers!" returned the doctor, as he watched the whirring wheel. "There is no winter in your blood."

"Eh, signor, the candle burns low; a puff will put it out. And who then will look after you? Not the miserable Gentile, that insect, who knows less of the world's ways than would fill a snail-shell. The house that has no woman in it is a ruined house, signor. You must marry, that I may die content."

"Death will come," said the doctor, gravely; "but yesterday you did not fear it. And it is only one day nearer, now. You talk of winter, too, before its time. See, above your head, there is a rose."

"The last," she answered; "to pick that would bring ill luck upon the house. Master, do not touch it, I pray you."

But the rose was already plucked, and, as the doctor held it out to her, its petals fell apart in the hollow of his hand. To Monna Modesta this was the worst of omens, and as if to confirm her superstitious fancy, a violent gust of the autumn breeze shook every twig in the garden, and raised a cloud of dust about their feet. The small whirlwind passed them by in a moment; but she had spoken truly; there was winter in its breath.

"Keep the rose, signor," she said, reproachfully; "for death has overtaken it. Is not this a warning? Make haste to choose your wife, and choose her well, Maestro Ambrogio."

The doctor smiled, and pointed at the door of his laboratory.

"My wife is there," said he, lightly. "She is wise and gentle and forgiving, with no complaints and no harsh words. She is always young, always beautiful; after all these years, would you have me turn against her now, and prove unfaithful?"

"Has my master lost his senses?" muttered Monna Modesta. "Of what woman is he speaking?"

"Of no woman, but of Science," replied the doctor, laughing. "She is the best and sweetest wife in the whole world."

"A fig for her!" cried the old servant, testily. "Tell me! Can Science go to market, and choose between an old fowl

and a tender chicken? Can she mind the spit, or sew new hooks upon the robe you wear? Can she make me young again, or even persuade me that I am not growing old? Science! Bah! Can she turn winter into spring, or bring the dead to life?"

"Or bring the dead to life?" The doctor had gone laughing to his work again. But these words made him start; they rang in his ears after the door had closed upon them. He stood grave and silent, far removed in thought from the musty disorder of his workshop, until a sweet perfume, strangely out of place there, recalled him to himself; it came only from the fading flower, rudely crushed and broken in his hand.

"The last rose," he said, gathering up carefully some of its outer petals that had fallen to the floor. "Will it bring ill luck upon the house? We shall see —we shall see!"

That night Monna Modesta summoned him in vain to supper. She laid the cloth, and sitting down beside it watched and waited—then nodded and dozed over it alone. She woke at a late hour, to find the food still there, untasted. A light shone in the laboratory; and stealing out into the dark, she climbed the trellis cautiously to the little window and looked down. There sat the doctor before a small brazier filled with glowing embers, turning the leaves of a parchment book in old black-letter. He stopped, and sighed; then, to her astonishment, he flung the fragments of a rose—her rose—into the heart of the hot coals; and fell to reading again in the great book. A cannon-shot would hardly have aroused him from his studies. But she crept back as quietly as she came, in speechless wonder; went to her bed, slept and dreamed, still wondering.

In the morning, the table stood precisely as she had left it, her master's bed was empty; and her honest wrath broke forth upon the head of the student, Gentile, who came at his accustomed hour. He was a handsome youth, wearing a cloak of violet silk jauntily draped over his velvet doublet. A lute was slung across his shoulder. The very ease and trimness of him carried Monna Modesta's anger beyond the bounds of reason.

"Here are fine doings, truly!" she cried. "Maestro Ambrogio has had neither food nor sleep this night. Why was not your splendid laziness here to help him?" And never listening for his answer, she went on:

"Go out, and fetch him in to breakfast. I pray our gracious lady that he be not starved already. If you find him dead, lay it at your own door—popinjay!"

Maestro Ambrogio looked pale and worn, but, somewhat to her regret, he was not dying of starvation. She pointed at the table with an injured air.

"It is true," he said, "I have an appetite. But, as you see, my night's work was not unprofitable."

And before seating himself he handed her a rose.

She knew that none were left in the garden, yet she turned instinctively to the window; for the flower was but half open, and seemed to have the morning freshness in it.

He shook his head, and smiled.

"No," he said, "I did not find it there. To please you, I have restored the dead to life. That is all."

He was above any wilful deception, before all human creatures to be trusted; but now she doubted him, even while she could not help observing that, in size and color, this was the perfect counterpart of the rose so lately reduced to ashes under her too curious eyes.

"Well," he continued, "you will never say sharp things, any more, about my gentle mistress. Come! Confess that her work has been complete and wonderful."

"Wonderful!" repeated Monna Modesta, pressing the rose to her lips, that she might conceal her doubts behind it. Then she found it dry and scentless, and she believed him.

But the increased respect with which she now regarded her master had a touch of pity in it, a new tenderness unfelt before. It was plain that he failed to perceive the fatal imperfection of his handiwork; his air of triumph betrayed conclusively an absolute faith in his own skill. And the old servant could not find the heart to undeceive

him, but left his mind clouded with this last illusion, as if she had been dealing with a child. After all, the rose without its perfume was a sufficient marvel; she put it away in water, crossing herself, involuntarily, as she did so. While it lived, her wholesome awe of it continued; she would not even touch the unholy thing again, but when it had faded for the second time, seizing the dried stalk with a pair of tongs, at arm's length, she flung it into the fire; then raked apart the ashes. They should not kindle into another life through any fault of hers.

Winter came, and with it the first symptoms of the infirmity she feared. Her voice shook in an annoying way, her step grew heavier, her wrinkles deepened; she compared herself to an old witch, when she looked in the glass. Her lightest household care became a burden, even grumbling was an effort. But she toiled and scolded and drove her bargains with unflagging spirit, praying only that death might find her still in the pious fury of her work. She was ready; let this hour be her last; she wanted no interval of deplorable rest, no sickly folding of the hands.

Her master's future gave her more concern than ever. He had drawn very near, he told her, to that greatest of discoveries, which had baffled him so long. But no further hint of his revealed anything of its scope or even of its nature. Vainly, she took the young student into favor, plying him with wine, artfully leading him on to gossip indiscreetly about Maestro Ambrogio's affairs; and gaining only a reluctant admission that Gentile was quite ignorant of the possible result to which their labors tended. He performed his share of them adroitly, by his own showing; and slept soundly each night when they were over. But at his return, he often found that the last day's work had been undone. For day and night his master seemed to toil incessantly, suffering repeated discouragements, but through them all upheld and strengthened by some wild hope that he would not explain.

One morning, Gentile presented himself only to be sent away again. All that day, Maestro Ambrogio did no work and spoke no word. Monna Modesta came and went, but he never heeded her, until she made a direct attack upon him with intrusive questions, when he shook his head mournfully. His eyes glistened; a tear trickled down upon his beard; she was sure, then, that his experiments had failed.

"Heaven help us all!" she thought; and clattering off to the neighboring church, she said her prayers in one of its chapels.

She heard him stirring in the night; he left his room, his step died away upon the stairs. She followed, but not softly enough, for at the garden door, in the dark, she found him waiting. She felt his hand upon her wrist, and drew back, alarmed. But his reproof was of the gentlest.

"Why do you get up so early? One watcher is enough to guard my house. Go to your bed, and sleep; it is the best service you can do me."

And she obeyed him, silently.

The next day, Maestro Ambrogio recalled his student. The old hope had revived, informing new schemes, inducing new tests. And as time passed, as his problem advanced favorably toward its mysterious solution, the confidence daily growing stronger within him shone through his eyes and gave his face the radiance of youth. He was like the fortunate lover, who believes that some divinity has alighted upon the earth to walk hand in hand with him forever.

At length, when Monna Modesta imagined that the hour of triumph must be very near, her master, who so rarely stirred abroad, suddenly bade her prepare him for a long journey. In answer to her startled look, he told her that all was well with him; that he had only one venture left to make; but that he dared not run the extreme risk it involved, without first consulting the one living man whose judgment could be called infallible. This was a famous Venetian doctor, almost a century old, unimpaired in mind, but far too feeble in body to endure the fatigue of travel, which, therefore, he himself must undertake. He charged her solemnly to admit no one, not even Gentile, to the house during his absence. The laboratory door he locked and sealed, leaving all behind him, apparently, except a scroll of parch-

ment easily to be carried in the hand. The time appointed for departure came; the horse stood at the door, and Maestro Ambrogio lingering upon the threshold gave his last instructions. Then, with a smile, he added:

"And how shall I reward you for so much fidelity? What shall I bring back from Venice to my constant friend?"

"Ah, signor, a kind, gentle mistress—only that. Marry your wife, and bring her back with you."

"A wife, from Venice?" said the doctor, laughing. "Well, who knows? I have done stranger things. But, remember, I make no promises. God be with you, Modesta!"

"And with you, signor! A swift journey, Maestro Ambrogio!"

So he rode away. For many days there was no sign of him, and she was faithful to her trust. When Gentile demanded news, he found the house barricaded as if for a siege, and was forced to hold indignant parley with Modesta through a wicket in the outer door. She bade him sing to his lute, and not to her. The great Leonardo knocked once, faring little better.

"What! Hast thou yet heard nothing of thy master?"

"Alas, no, signor."

"*Misericordia!* Pray Heaven that some sly one of thy sex may not have beguiled him!"

"Pray Heaven that he be no more a bachelor, and good day to you, Messer Leonardo!"

At last, however, the door swung open for the master's much-desired return. He came, dressed in gay colors, with a light step and smiling face; followed by two serving-men bearing rich apparel, ribbons, silks and laces, to be unfolded and displayed before Modesta's wondering eyes. She tried to speak, but wanted words.

"What! No welcome for me?" he cried, merrily. "Yet all is as you wished it. I come in my wedding garments; are they not well chosen?"

"Heaven be praised for all its mercies! You have grown young again. But the bride, signor?"

"She will follow. Prepare a chamber for her and for these things."

"Eh, the waste of money! Look at that brocade! What great lady have you married? These trappings are for a princess; how is it that your wife will wear them?"

"They are not fine enough. Wait, and you will see."

She set the house in order with much nervous apprehension. How should she make room for these new fineries? There was no chest fit to hold them, except, perhaps, the splendid marble one hidden away in her master's workshop; but she dared not ask him for that. Well, it mattered little; no doubt the new mistress would bring a retinue of servants to undo any humble work of hers; they would overrule her—she would count for nothing; that, of course, was the fate of age, and she must accept it cheerfully; she must bid them all good-night, and let the past to which she belonged enshroud her in its friendly shadows. All would be for the best that promised a long and happy future to Maestro Ambrogio.

Thus Modesta dealt with her misgivings. But the new mistress did not come. Again the doctor buried himself in the laboratory, and pursued his dreary studies. To all inquiries about his wife he replied that she was still to be expected; but he fixed no day, no hour. Then, fearing that the great lady might take them by surprise in the night, she slept with a lighted lamp near her bedside, to wake continually, and strain her ears at the faintest sound. But her master discovered this, and rebuked her almost sternly for excess of zeal. So she resumed her former habits, asked no more questions, left events to wait upon themselves, the stars to rise and set as they would, unnoted; till the winter had worn away.

The doctor's cellar contained a few bottles of old wine, lying there in wait for rare occasions. One evening of the early spring-time, he brought out from this dusty ambush a small flask, and, uncorking it with deliberation, he called for glasses. All that day he had been in a state of feverish disturbance, and his hand shook now. The golden liquor leaped and sparkled in a most inviting way, and Monna Modesta, yielding readily to temptation, took the glass he offered; likewise a second, which he pressed

upon her. She wondered what silent toast they could be drinking; for this, assuredly, was a kind of ceremonial. But she had grown too old for such indulgences. The wine made her strangely drowsy. Was there mischief in it? Why had she taken so much? Why had she touched it at all? She went to her room, repenting of this childish folly; and slept profoundly the sleep of childhood, throughout the night, far on into the morning hours.

The flood of sunshine to which she woke gave its own startling evidence of time unduly wasted; but even this reproachful glare had failed to act upon her sluggish senses. That worthless insect, Gentile, clamored at her door; and his voice rang with delight at the detection of her grievous lapse in duty.

"Modesta! Monna Modesta! Wake, and find your wits! My master's wife has come from Venice, and no one stirs a finger to receive her. Do you sleep all night, and all day, too?"

"Beast!" she cried, in a passion. "Have done with bellowing, and mend your manners. When I sleep at all, it is with my eyes open. Go back, and tell them I'll come presently."

Below, in the state apartment long ago made ready for this festal day, the old servant found Maestro Ambrogio in his brightest colors, but formal and solemn as a sentinel; and there, too, on a low couch lay the noble lady, sleeping.

How young, how fair she was! As sweet, as simple in her beauty as the Virgin of the Annunziata's shrine! Yet these soft features were aglow with life, these full, red lips were not divine, but exquisitely human. About her head she had bound a veil, through which her heavy coils of hair showed gleams of reddish gold; and she had put on the rich, brocaded garment brought from Venice, worth a fortune in *quattrini*. It seemed, in truth, not fine enough; it should have been sown with jewels. But her only ornament was a slender golden thread of curious design, clasping one wrist.

She moved a little, smiling in her sleep. And the smile was mysterious, unaccountable, perplexing as the smile of archaic sculpture; with something of malice in it, as though the thought behind, concealed rather than expressed, were not unmixed with evil. So the sirens must have smiled when the bark foundered, and the poor mariner went unresisting to his death, happy in that inexplicable joy—perhaps, exultant even, with the look upon his face that Maestro Ambrogio's now wore.

"See!" he murmured. "Was not this worth years of loneliness? Could one have better fortune, even in his dreams?"

But Modesta trembled with a vague distrust, as if some disaster were impending. The smile was hateful to her.

"Ah, signor," she sighed, "is that my mistress?"

Her master had already turned away, rapt in his dream, and sheltered by it from outward influences.

"Iovina!" he called, softly. "Iovina!"

Then the sleeper woke. He caught her hands and kissed them, drawing her toward him from the couch, folding in his arms the lovely presence that had the smile of absence in it still.

The light in her clear gray eyes, however, was reassuring. Her voice, too, was a pleasant one, though it uttered strange words which Modesta could not understand; but her master answered them in the same tongue. The new mistress looked wonderingly yet not unkindly upon the faithful servant. It appeared from what was said that she had come alone, with no train of attendants to be taught their duties. Modesta would have her own way to all intents and purposes; would still reign supreme in the market-place, be Monna Modesta, *padrona della casa*, to them all. This cheering reflection did away with presentiments for the time being. The household affairs went on that day as usual; only that sometimes in the pauses of work Modesta shook her head, and whispered to herself, doubtfully:

"Iovina! I do not like it; it is a pagan name."

She shook her head in the same discontented fashion over many things that happened in the following days. As might have been expected, her master led, at first, a life of complete infatuation. Then he resumed his studies, but with half a heart, interrupting them un-

der the smallest pretext to dance attendance on the languid lady whose slave he had become. To show his wife a flower in the garden, to read her a line of Tuscan verse, that should give her in one breath a better knowledge of his love and of his language, were tasks of more importance than any prescribed to him in those ponderous books of his. This, of course, was commendable and proper; one pardons, nay exacts some such parade of weakness in the manners of a bridegroom. It was in the attitude of her mistress that Modesta found the first cause for complaint. Clearly, Maestro Ambrogio's devotion was wholly wasted; day by day, he squandered it, like the money woven into the embroidered garments worn by his foreign princess, who either had no heart to give him in return, or had chosen to withhold her gift. Her thoughts seemed always on the wing. The dragon-fly, darting to and fro among the leaves, could win her smile as easily as the poor man's fondest word. She was no happier for his approach; her steel-gray eyes never looked upon him tenderly. At what, then, was she always smiling? At him, perhaps; not with him, surely. For all his kindness must have failed to touch her, since she took it so impassively — sometimes, indeed, as if she hardly knew that he was at her side.

Ah! All men were alike, and all were fools! It needed no spark of feeling to bewitch them; not even a pretence of it. Here was Gentile, now, openly worshipping this same idol with eager eyes. A stray glance from her would upset him for a whole day. And Messer Leonardo, too! At the first sight of her face his admiration burst forth in a torrent of superlatives. She smiled upon him; he laughed, and talked of other things; but his eyes never left her. He came again, and asked that she might sit to him. And when permission was refused, almost on his knees, he begged, implored Maestro Ambrogio to grant it. The smile haunted him, he said, impelling him to paint it from memory if not from life; its perfect beauty existed for no day, no generation, but must be fixed and made imperishable for all to know until the end of time. Without this attempt, he should hold himself false to the divine art he served; and with all the success he had achieved, with laurels heaped on laurels in the future, hereafter ages would hold him forever miserable, if this duty to the world went unfulfilled, if, for want of means or want of inspiration, he had failed on earth to perpetuate that faultless smile.

These entreaties in the end prevailed. The painter began upon his first sketch —a drawing in red chalk, at which he worked for days, but only to destroy it. The pose was wrong, he explained; he must try another; and this, too, came to nothing. He lamented bitterly his own incompetence. Never had subject thwarted him like this; always the look he wanted was not there. That elusive smile played tricks with him; its lovely lines would not be caught, but changed their places before he could reproduce them. How to do her justice? How to accomplish what he already feared would prove impossible? To control that look a while, he must control the sitter's mind; he must have music, some sweet, delightful strain to charm her into subjection to his will. So Gentile brought his lute only too readily, and played to them; while a new drawing was begun, and all went well with it.

But all went far from well with Maestro Ambrogio. Of late, he had grown moody and despondent; most unlike himself. And now, to-day, he left his furnace, to pace aimlessly back and forth in one of the garden-paths—that farthest away from the great hall of the house, where the painter had set up his easel near an open window, through which Gentile's music and even Messer Leonardo's progress could be followed. For, now and then, the master spoke a word of satisfaction, in his own encouragement; he had found the way at last; here was success indeed. But the master of the house only sighed when he heard this, and his step grew heavier and more uncertain, as though a leaden clog were dragging at his heels.

What weight of sorrow thus depressed him? Old Modesta knew him too well, had watched him too closely not to have divined it. All was plain enough. The scales had fallen from his eyes; he had come to doubt the wisdom of his choice;

to distrust the smile of the enchantress, and with reason. In one fatal cast, rashly made, he had flung away his life; and now he repented his rashness. The poor serving-woman, who loved him better than she loved herself, looked at him and longed to help him, but could not find the way. What comfort had she to offer? If she spoke, what good would her words do? This: that he would be forced to answer them; and if he did not speak, his heart would surely break. So, praying Heaven to guide her, she went out and stopped him in his walk.

"My master," she began; "never have I seen you so unhappy. What is it now that troubles you?"

He stared at her with shining eyes, dry and tearless.

"Nothing," he answered. "Nothing."

The tears were in her eyes. "Oh, my poor master!" she sighed, mournfully. But he brushed by her, and was gone again, muttering to himself.

"My wife!" she heard him say.

Then there came a shout of triumph, and the painter dashed out upon them with the drawing in his hand.

"See!" he cried. "I have surpassed myself. Who will dare to tell me this is not worthy of her?"

In that glowing moment of success he had no thought beyond his work. The doctor took the paper, while Leonardo, passing behind him and leaning upon his shoulder, failed to note with what trouble he regarded it.

Modesta looked on, silently. They made a picture in themselves against a background of the vine-leaves, as if they had been posed for embodiments of light and darkness. Light gleamed in the painter's rose-hued silken mantle, in his flushed cheek, his joyous eyes. He was all aflame. In the other all was clouded, cold.

But the hand of genius has a strength that cannot be resisted; and it held her master now. Slowly, the light illumined him. His face brightened, until it reflected the painter's look of exultation.

"It is wonderful!" he whispered.

"*Caro mio!*" said that other master there behind him. "This is a fortunate hour for us both—we must not let it slip. I will go home, and get my colors; then make the portrait—finish it, while the light lasts. Think, *amico:* this day's work will hang upon some wall in Florence, ages hence when we are only memories. And all the painters of the world will bow before it. They will say: 'See how one brushmark, tracing out a woman's smile, gave poor Da Vinci his undying fame! Look at Leonardo's masterpiece—Iovina, Maestro Ambrogio's wife!'"

"Yes," returned the doctor, eagerly. "The colors—bring the colors, noble Leonardo."

The painter hurried off, catching as he went a note of laughing music, and singing his own song to it. For in the house Gentile's lute played on.

Then, as the doctor listened, his face grew dull and grave again. The old dark thought possessed him wholly. The lovely drawing slipped from his hand, falling face downward in the earth. He let it lie there, and, turning away, he flung himself upon one of the garden-benches, hiding his own face.

The silent witness, whom he had forgotten, now forgot herself. Overcome with his despair, she knew neither what she said nor what she did; but, rushing forward, knelt beside him, and poured out her inmost soul in a flood of unconsidered words.

"Master, why did you marry her? She has brought ruin upon the house; she cares for nothing that is good; she never goes to church, never says a prayer; she is a pagan, a demon. How has she ensnared you?"

"Modesta, Modesta! What words are these?"

"I cannot help it—I cannot bear it longer. Why did you go so far to bring her home? She is not like other women. *Maestro mio,* she has no heart, no tenderness. She is like the flower that sprung out of the ashes, beautiful, without its fragrance."

She had risen nearly to her feet in her excitement, but Maestro Ambrogio now caught her by the wrist, and forced her back upon her knees.

"What do you mean?" he asked.

"Forgive me, master; I forgot——"

"Speak!" he continued, sharply. "What flower do you mean?"

"The rose," replied Modesta. "The

dead rose that seemed to live again. Signor, it was not life, for life has sweetness in it. And she has none—she has no feeling, no kindness in her. She is like the rose."

As though the woman had stabbed him to the heart, he released her with a moan of anguish.

"Oh, had I known!" he cried, in a broken voice. "Of all men that ever breathed I am the most pitiable. It is true—it is true. She is like the rose."

A light breeze caught the fallen paper, which fluttered to his feet. He stooped for the master's handiwork, considered it one moment, then tore it up, and gave it to the winds again; not angrily, but deliberately, with a look and gesture of the deepest sorrow.

Modesta nodded approvingly. Then her eyes flashed. He should do more than this; such calm submission was intolerable.

"Listen!" she cried. "My lady must have music. What cares she for your unhappiness? The boy amuses her, and she smiles upon him. Ay! Go on with it; play and sing to her, do!"

The words were hardly spoken, when the music stopped. The doctor rose and moved slowly toward the house without an answer to Modesta, who, accepting the silent rebuke, followed him meekly, but only to the window.

The lute lay upon the floor. There was the painter's seat, there his empty easel; and beyond, where he had posed her, half reclined the lovely figure he longed to make immortal. But now Gentile knelt beside her, drew her face down to his, and kissed it; and she permitted this; she did not draw away; the golden ornament at her wrist shone through his dark curls, while she smoothed the hair upon his temples, idly but gently. In truth, the boy amused her, and she smiled upon him.

A shadow came between them and the sunlight. With a cry of terror Gentile fled, unregarded. For Maestro Ambrogio went directly to his wife, and took her hand.

"Come!" he said, gravely, in a tone of pity rather than of remonstrance. "Come with me!"

She made no effort to resist him; and with a firm step he led her out into the garden. While they crossed it, all the sunshine seemed to come from her. She caught its glory like a mirror, and gave it back in playful gleams; then took it all away in one last, radiant smile, when they passed into the laboratory and the door shut behind them. She had outdone the flowers; they looked cold and colorless. The perfect moment of the day had passed. The hours now could only droop and die.

What stillness in the house! The mute, unbidden guest, misfortune, had chosen it for his abode. Modesta barred the great door, and when the painter came she met him at the wicket, to put him off until the morrow with poor excuses. He entreated, threatened her ineffectually. He begged at least to have his drawing, but she denied him even that; she dared not tell him it had been destroyed. One word answered everything. To-morrow he should see her master; all would explain itself, all come right to-morrow. And while he protested, she closed the loophole in his face.

He went away and did not come again. There was no further disturbance from without; even the distant rumors of the city sunk to rest. The great blue silence overhead deepened and faded sombrely into the chilling pallor of the stars. Below, in the garden, the fireflies glanced about, the crickets droned; no other sound broke in upon the quiet of the night; no sign of life, no movement from the workshop; there, too, all was black and still.

Bolt upright in her chair, hour by hour, Modesta sat and told her beads. From intervals of uneasy slumber in which she heard her master's voice calling her, she started up to listen breathlessly, to drop back and pray herself to sleep again. At last she felt sure that she had not been dreaming. "Modesta! Modesta!" the cry of distress came sharply and clearly, bringing her to her feet with an answering cry. But now the cool, gray tint of morning met her eyes. The drowsy notes of night were hushed. She could hear the twitter of the waking swallows; but nothing else.

She went to the laboratory door, and knocked repeatedly—then tried the latch; it yielded, and she stood for the first time on that forbidden ground.

The place was like some dream of a disordered mind. Piles of mouldy books, loose parchment leaves, yellow and illegible; flasks of metal, incrusted and corroded into fantastic shapes and colors; swollen monsters of glass with slender necks, emitting dull phosphoric light, or bearing old stains of substances long since distilled; mortars, and heaps of pounded drugs; fossils, and charts, and livid specimens in bottles; these things and more were huddled together in motley groups, or flung aside neglected. And in the midst of all, by the door of the furnace, which was choked with dying embers, crouched Maestro Ambrogio.

He seemed to have dropped asleep with his hand upon the bellows; they had fallen close beside him. The air of the room was full of dust, through which Modesta made her way with timid steps, hesitating to disturb her master, shrinking from the surrounding objects, yet eager to examine them. She stopped half stifled, drew back for freer breath, returned, went on. She could see more clearly now. Maestro Ambrogio was alone. Where then was her mistress? What had he done with her? At the form into which the question shaped itself Modesta stood still, trembling.

Here, close by, was the carved chest which had aroused her curiosity, long ago. At that moment, through the little window to which she had climbed in former days, the first sunbeams slanted down. She saw at her feet a stone tablet, rudely inscribed with records of a dead people—she remembered others like it, unearthed among her own mountains; and on the lid of the coffer at her side, she saw a sculptured figure, in high relief, perfect in form and feature—the graven image of the stranger who had brought ill luck upon the house, the woman with the pagan name.

There she lay asleep, as Modesta had first seen her, with the clinging garment, the veil about her head, the ornament at her wrist. And her lips had the same enchanting smile upon them; it was hard to believe that they were cut in alabaster. This seemed to be a living statue of one who in life had only seemed to live.

What did the chest hold? Modesta must know that; now was the very time. She tugged at the lid with all her might, but could not raise it. Slowly, without noise, she pushed and pushed again, sliding it aside. Ashes there—and nothing else; ashes, fine as dust; stay, something more, on which the sun's rays glittered. It was the twisted thread of gold that Maestro Ambrogio's wife had worn.

With a cry Modesta staggered back; then, to save herself, caught at the alabaster cover which toppled and fell, dashing itself into a thousand pieces. Dust and ashes mingled in a thicker cloud. The room woke to life. Mice scampered across it, squeaking; spiders fled to hide themselves; a bat flew wildly in and out of the dark corners. The embers of the furnace rattled down, and flickered into flame; while poor Modesta waited with downcast eyes for her master's angry word. It did not come, and she looked up. The firelight flashed upon his face. It was a death-mask. The days of his reproof were over. All the vexations of the world were done for him.

Modesta returned to her native hills of the Mugello, and for many winters more her master's dead face haunted her, as the look he could never catch haunted the great painter all his life. It was a life of wandering, and he died in France years afterward. The picture he longed to make was never finished. But between him and every woman's face he painted came that mysterious remembrance, which, in spite of himself, his brush recorded. The world saw it, named it, handed down the name; and, to this day, we know it as the smile of Leonardo.

The Piræus, with Mount Lycabettus and the Acropolis in the Central Distance.

LIFE AND TRAVEL IN MODERN GREECE.

By Thomas D. Seymour.

GREECE is a new country. Less than sixty years ago she emerged from a devastating war in which nearly one-third of her people perished and many women and children were sold in Turkish slave-markets. Her towns were in ruins. Her roads and bridges were destroyed. Her vines, fig-trees, and olive-trees had been killed. She was in the lowest depths of poverty. She had neither courts of law nor schools for the people. "The Greeks had by long oppression been degraded into a kind of Christian Turks." During a despotism of three centuries and a fierce war of six years, and in the following years of uncertainty and anarchy, her men had learned lessons of cruelty and desperation. She had no trained and recognized leaders.

Can any one wonder that brigands still haunted her mountain fastnesses, and that the land was racked by civil dissensions?

Greece is still to us the land of art and philosophy, the intellectual leader of the ancient world, the parent of modern civilization. Many of the Greeks themselves dwell in the memory of the past, and this has done much to lift them from their humiliation, though they may have been at times more ready to boast of their ancestors than to emulate them. They cherish the ancient glories of Athens and Sparta. They see before them every day many memorials of former greatness. To them no insult is so dire as the insinuation that the old race has become extinct, and that the present inhabitants of the country are descended from Goths, Slavs, and Turks. The degradation of the nation under Turkish rule renders the memory of recent centuries abhorrent, and the recollection of the earlier glory is all the more delightful. Modern Turks and ancient Persians are classed together. The story of the defeat of Xerxes is as personal to the Greek as many of the conflicts in the war for independence.

The kingdom of Greece is known to modern statesmen as an insignificant country, important only as a disturbing element in European politics. The land is small—about as large as the State of West Virginia, a third smaller than the State of Indiana (with which it agrees in number of inhabitants); twice as large as the kingdom of the Netherlands, but with only half as many inhabitants. Its area and population are both about the same as those of Bulgaria; but its revenue is twice as great. It covers about 25,000 square miles. In latitude it corresponds exactly to the lower half of the Spanish peninsula, lying between the 40th degree of north latitude (about the latitude of Philadelphia) and the 36th (that of Gibraltar and Knoxville); the 40th parallel passes over Mount Olympus, and the 36th parallel is just south of the island of Cythera. Athens lies just midway between these extremes, on the 38th parallel, a little north of Richmond.

Shakspere's epithet, "nook-shotten," can be applied to no other country so truly. The sea has insinuated itself into the land in many bays and indentations. The coast-line of Greece is nearly two thousand miles in length—three times as long as is strictly necessary to enclose

it. With an area smaller than Portugal, Greece has a coast-line longer than that of Spain. Only one country of Peloponnesus does not touch the sea. This nearness to the sea affects not only the scenery, but the life of the people.

Greece is an island. The day seems yet far distant when the mountains of the north will be pierced, and railroads built through ancient Macedonia. Athens is reached by steamer from Constantinople in less than 36 hours; from Messina in less than 48 hours; from Rome, viâ Brindisi, Corfu, and Corinth, in less than three days; from Trieste in two hours less than four days; from Marseilles in five days. The traveller has a wide field for selection, and each route has its advantages.

Leaving Rome on a Wednesday evening, I reached Brindisi, on the east coast of Italy, in time for dinner on Thursday evening. The steamer left at midnight, and reached Corfu early on Friday afternoon, after a delightful sail along the Albanian coast, where range after range of mountains rises behind the rocky shore. The good harbors of Greece are not on the west, but on the east side of the country. We remained at Corfu long enough to enjoy the view from the citadel, to stroll through the town, and to drive through the beautiful suburbs, delighting in the fascinating luxuriance of vegetation in the grounds of the royal villa. Early on Saturday morning, we reached Patras, at the entrance of the Gulf of Corinth, and during that forenoon we were passing between high mountains—Parnassus on the north, and Cyllene and others on the south—near enough to the shore to secure an ever-changing foreground for the scene. The steamer reached Corinth at two o'clock Saturday afternoon. Thence the traveller proceeds to Athens by rail; only about fifty miles, but it is a four hours' ride. The steamer from Brindisi now connects with the railroad for Athens at Patras.

Greece is divided into little principalities by a network of high mountains. No peak rises into the region of perpetual snow; but both Parnassus, rising above Delphi, and Taÿgetus, towering above Sparta, are about 8,000 feet in height. The still higher Mount Olympus is unfortunately yet in the possession of the Turks. These heights are almost all barren; most are abrupt, and scored by sharply cut ravines. The country has been often shaken by earthquakes, and the rents of volcanic action have been worn still deeper by the winter torrents.

Greece is a little world in itself. Nowhere else does the traveller find such a variety of climate, scenery, and customs, within such narrow limits. From orchards of figs, mulberries, oranges, and olives, one can stroll easily in a morning's walk to chilly and barren regions where only goats find a scanty subsistence. The barren plain of Attica, with its clear, cloudless sky, is but a dozen miles away from the heavy atmosphere and fertile soil of Bœotia.

The different climates of Greece are too numerous to be treated briefly, and none but that of Athens has been accurately observed. Few changes seem to have occurred during the last twenty-three hundred years, except as connected with the destruction of the forests, and the stoppage of some subterranean channels which has made certain districts malarious. Athens is noted for the dryness of its air, exceeding that of any other city in Europe; the sea-breezes lose all their moisture in passing over its plain. Colors in the distance do not fade into a monotonous bluish-gray, but the colors of the plants, the rocks, and the earth form a sharp contrast with those of the sky and the sea, which are much deeper than ordinarily seen in the eastern States of America. Distance seems to be annihilated. The lack of perspective in ancient Greek art has been explained by the lack of perspective in Athenian scenery. Mount Hymettus, half a dozen miles away, and no easy climb, seems fitted for a walk before breakfast; the citadel of Corinth, more than forty miles away, is clearly seen; while Mount Cyllene in Arcadia, more than seventy miles distant, is one of the most striking objects in the Athenian landscape, and its snow-clad summit has been seen at midnight by the light of the moon.

Most of the rain of the year falls in December, January, and November; and it comes in showers rather than in long-continued storms. Only twenty-nine

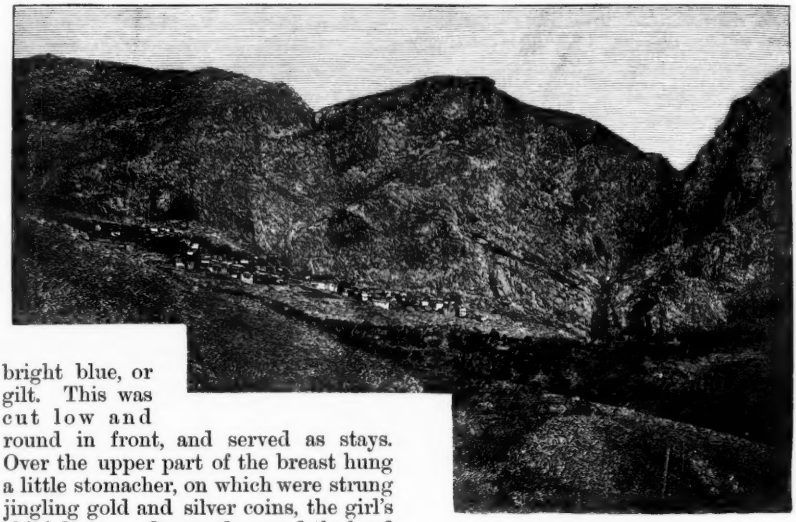
days of the year are called cloudy, and on only three of these is the sun completely hidden all day long. In the summer, Athens suffers from drought, and the wind drives the fine dust in suffocating clouds. The dryness of the air tends to the preservation of the marble statues and temples, which do not become moss-grown and corroded as in America, but take on a golden *patina*.

The mean temperature of Athens is 62° F., nearly that of Corfu, Gibraltar, or the Bermudas—three degrees higher than that of Lisbon ; but it is colder in winter, and much warmer in summer. The difference between the temperature of January and that of July, according to the thermometer, is about three-fourths the difference between the temperature of the same months in New York City. But both the cold and the heat of Athens are very piercing. Little snow falls in Attica ; most of it melts before reaching the ground ; but the fierce wind drives the sand in storms in winter as it does in summer.

In spite of the chilly months of winter, Greek life is in the open air. The houses are built for temporary shelter rather than for constant occupation. Many of the Greeks sleep in the open air during the summer months. Their gatherings for amusement are on the open squares. The artisans and traders pursue their calling in the streets, not infrequently occupying all of the sidewalk. From the Acropolis of Athens, one looks down into a multitude of little courts, and sees the importance of these for the family life.

In the spring-time, many villages and hamlets have gatherings for dancing in the open air. The dance at Megara has attracted so much admiration that a special train is sent from Athens on Easter Tuesday, for the accommodation of those who wish to see the gay costumes, bright faces, and curious dance. This festival at Megara has become a public display. One afternoon, on my way back to Athens from the ruins of the fortress of Phyle, I saw a similar dance before the village church of Khasiá. There the people seemed almost jealous of the presence of foreigners.

On Easter Monday, two years ago, as I strolled along the shore of the bay of Salamis, I saw a small sail-boat just putting off. I hailed the skipper and he took me on board. A fresh breeze brought us to the island in ten minutes. After an examination of one or two topographical questions, I strolled at random along a path through the fields. Presently I found myself within a hamlet. The passages between the houses were lined by high walls ; they were not intended for vehicles, and had not been trodden by horses. No house had a window or door opening on the street, but an occasional gate ajar gave me a glimpse into a courtyard where the family lived. Opposite the entrance was a chicken-coop or an oven (shaped like a beehive). The houses had been newly whitewashed, in honor of the Easter season, and the vertical part of the steps was washed with bright blue. I met only two men, and pursued my way. After many turns (the passage was as crooked as the streets of Venice), I came to the public square, which was about seventy feet each way. At two corners of this square, were sheds of cafés where groups of men were smoking, and drinking a very resinous wine. A high wall formed the sides of the rest of the square ; only one narrow, wooden-shuttered window was to be seen. Along three sides of the square, sat the matrons of the hamlet, with their babies and other young children—some sitting on a bench, others squatting on the ground. I evidently was the only onlooker who did not live in the village. I joined one of the groups of men and was very courteously received. They were eager for a comparison of customs. In the middle of the square was a ring or coil of maidens, the eldest perhaps twenty years of age, the youngest hardly more than five years old. No two were dressed exactly alike, yet there was a general similarity of style. All wore long white skirts, some of delicate materials and others of heavy stuff. The overskirt, reaching to the knee, was dark and full, hanging in many folds. A broad belt of silk hung below the waist. An elaborate apron of great variety of color and decoration, reached nearly to the ankles. Each maiden wore a closely-fitting vest, generally of red,



Delphi and Mount Parnassus.

bright blue, or gilt. This was cut low and round in front, and served as stays. Over the upper part of the breast hung a little stomacher, on which were strung jingling gold and silver coins, the girl's chief dowry. Over and around the head (sometimes covering the lower part of the face), was wrapped a gay kerchief. Seven of the girls, however, who always stood near the head of the line, wore veils of white tissue. The maidens' sleeves showed no organic connection with any outer garment; they fitted the arm closely, and were of some silk stuff, with stripes running around the arm. Most of the girls wore slippers, but a few were barefoot. The whole costume was bright with harmonious colors.

About sixty of these maidens danced together, with arms interlaced in a double line, for hours. The dance was led by one or two young men at the head of the line—attached to the maidens only by means of a handkerchief! The music was only the humming of the girls, —rarely did the words of the song become really articulate. The steps were simple, generally three forward, followed by three back obliquely, so as to move in a circle.

I saw no "mixed dances" of men and women in Greece, though these have been imported to the cities. The men, however, as in Homer's day, have their own dances, which are much more vigorous than those of the girls.

Greek houses are never built in many stories, like the houses of Italian cities. The people are not fond of climbing stairs, and some have a wholesome dread of earthquakes, which have caused devastation in many parts of Greece. Even the narrow streets of Athens are not dark; they are cosey rather than gloomy. In Sparta and Messenia, the sides and roofs of many houses are made of bamboo-like reeds, well plastered with mud. In Peloponnesus, generally, the ground floor of the dwelling is used as a storehouse and stable, while the living-rooms are reached by an outer staircase. Many of the peasants' huts are barren and comfortless. A violent storm drove us one afternoon to accept the shelter freely offered us in the best of a small group of cottages. A heap of dry furze divided the hut into two rooms, into one of which our horses were led, to the place of the family donkey. The family room had no floor, chimney, nor windows; no chair, table, nor bed. An aged man lay near the fire, two small children were playing with kids, which evidently disliked the smoke; a baby lay in a trough, which doubtless served also, on occasion, for a bread bowl. The mother of the children exerted herself to put dry shrubs upon the fire, and make us comfortable. Her husband was with the army in Thessaly, on the Turkish frontier.

Athens lies five miles from its harbor, the Piræus. The two towns now have about 100,000 inhabitants. In the early ages of Greece, cities were founded at a distance from the shore in order to avoid sudden incursions from pirates and hostile neighbors. Thus Argos, Mycenæ, Thebes, and Sparta do not lie on the sea. The seat of the new Greek government was established at Athens, half a century ago, largely for sentimental reasons, because of the glory of the ancient town. This situation is beautiful, but not so convenient as that by the harbor, and every archæologist mourns that (since the new city covers the ruins of the old) the ground is too valuable to allow of systematic excavations. Athens is a modern city; but, just as in the kingdom of Greece the distance is short from valley to mountain, from inland plain to the sea, so at Athens a walk of a few minutes takes the traveller through several kinds of civilization, and to monuments of different ages. The centre of the modern city is the Square of the Constitution, in front of the heavy Teutonic palace, of Pentelic marble, near the foot of Mount Lycabettus, which rises 900 feet above it. The best hotels are near this square, and from it a line of street-cars leads to the northwest, one steam tramway to the east, and another to the shore at the old harbor of Phalerum; while the principal business street leads to the west. Most of the modern city is European, and thus comparatively uninteresting. In the best business street the shops are small imitations of those of Paris. No distinctively Athenian or Greek articles are exposed for sale, except photographs and antiquities. The windows are filled with "nouveautés de Paris." The good book-stores are conducted by Germans. Near the palace are broad streets with avenues of pepper-trees. Here are the University, the beautiful building for the Academy of Sciences (which has not yet been formed), and the handsome houses of the excavating archæologists, Schliemann and Carapanos. Ten minutes' walk from the palace in one direction brings the traveller to old Byzantine churches; to narrow streets where carriages could not pass, and to still narrower ways in the bazaar, where donkeys carry the heavy burdens; where the men wear the broad trowsers of the islanders, or the Albanian white fustanella (petticoat); where all articles offered for sale are of home production. A fifteen minutes' walk from the palace in another direction leads the traveller past the Queen's garden (the greenest spot in Athens), the Russian Church, the English Chapel, the building which was for five years the home of the American School of Classical Studies, the magnificent columns of the Temple of Zeus Olympius, the Gate of Hadrian, the beautiful Choragic Monument of Lysicrates, the great Theatre of Dionysus, the Sanctuary of Asclepius, the Odeum (or Music-hall) of Herodes Atticus, to Mars' Hill and the Acropolis itself, with its Parthenon! The antiquities of Athens can be seen very quickly and easily. An English officer, a travelling companion of mine, was overcome with ennui on the second day of his stay in Athens; he had seen all that was to be seen!

A Greek Girl Dancing.

Excursions from the city are very easy, with the help of the railroads. The suburbs are rapidly growing in importance and attractiveness. The trip to Sunium (Cape Colonna) and back is an easy day's jaunt; a longer day is needed for the drive to Marathon and return. Eleusis may be visited in an afternoon; Salamis is easily reached from the Piræus. By taking an early train, the traveller can climb to the top of Pentelicus and see most of Central Greece spread before him —having the plain of Attica below him on one side, and the plain of Marathon on the other; following with his eye most of the strait of the Euripus, seeing Eubœa and the Cyclades Islands, Bœotia, Attica, Peloponnesus, Mounts Parnassus and Helicon and Cyllene—and yet return to Athens in time for luncheon.

The views from Athens are very beautiful, and no two heights afford the same prospect. The scene varies as in a kaleidoscope. The Acropolis, Mount Lycabettus, the sea, Salamis, the mountains which surround Attica, the mountains of Megara and Peloponnesus, are combined in various ways. The great olive grove of Plato's Academy supplies a wide patch of green, while the snow of Mount Cyllene adds a touch of white in spring-time.

Life in Athens begins early in the morning. The milkmen cry *gala* before sunrise. At six o'clock on a May morning most of the citizens are about their work, although the people of the metropolis are later risers than those of the country towns.

Shore of the Gulf of Corinth, with Acrocorinthus in the Background.

The people's costumes have been modernized, and the poorer men often wear shabby, ill-fitting European clothes, instead of the white fustanella (kilts), gay jacket, and red fez which had become the

Bay of Salamis, with the Island of Salamis in the Distance.

national dress, although it was originally Albanian. In the country the rustic dress is more picturesque. The home-made garments of coarse cloth, of goat-skins and sheepskins are attractive to the eye, even when ragged and stained. Capuchin cloaks are commonly worn by the men in cool weather, the hood being drawn over the head in a storm. These serve as mantles by day and blankets by night.

The women in the country are dressed very simply on ordinary occasions, but are perhaps more extravagant in dress for special occasions than in anything else. Hats and bonnets are almost unknown except in towns; ladies often wear a long veil-like wrap, or the fez, of

A Musician.

which the red is very becoming as it lies on their dark hair; women of the lower classes often bind a kerchief about the head. A face-cloth may conceal the lower part of the face from strangers.

Women are still kept in half-oriental seclusion. They have a retired gallery in the churches. They may perform hard labor in the fields, but they do not go freely upon the streets. Peasant girls shrink from going out to service, and much domestic work is done by boys.

Greek Maiden.

Greek women of the lower classes are seldom beautiful; if they ever have beauty as girls, they lose it under the hardships of their life. They carry heavy burdens.

Near Eleusis I met a dozen young women carrying kegs of water, each crouching under the load. The lads, on the other hand, are tall, straight, and dignified. Their dress is often much like that of their sisters, and more than once I exclaimed at the beauty of a maiden who proved to be a shepherd lad.

The Greek ladies of Athens incline to a full habit, and most would appear to better advantage in the more flowing robes of the country dress than in the close-fitting Parisian costume.

Travel in Greece has never been so comfortable and easy as now. At the close of the Greek war for independence, not much more than half a century ago, hardly a wheeled vehicle or a mile of road passable for wagons remained in the country. The Turks had destroyed the roads and the bridges. One of the first plans of the new government was for the construction of roads; but the work went on very slowly. One of the wittiest bits in About's extravaganza, "The King of the Mountains," is the charge made by the brigand chief for "repairs on the road to Thebes, which had become impassable, and on which we no longer found travellers to arrest!" Highways in Greece are very expensive; they are said to cost, on the average, $3,000 per mile. But they are often very rough, and poorly macadamized. The pieces of broken stone are so large that driv-

ers avoid them. Public conveyances are few. An omnibus runs between Athens and Thebes, and another between Thebes and Lebadea; but these lumbering vehicles run (if that is a correct term to apply) by night, in order to avoid the heat of the day. Thus the traveller has no view of the country to console him for the many discomforts of the ride. Another omnibus conveys passengers from Argos to Tripolitza, but spends thirteen hours in going thirty miles.

A definite course of travel in Peloponnesus has been fixed by custom during the last few years, but many detours are possible. The first part of the journey from Athens can be taken by railroad. I had the honor of buying the first ticket ever sold to Mycenæ. Leaving Athens at half-past seven o'clock in the morning, our train reached Eleusis an hour later, and Megara (where we stopped ten minutes for refreshments!) at half-past nine, and Corinth soon after eleven. Leaving Corinth at noon, we stopped at Nemea at two P.M., and half an hour later at Mycenæ. We spent the afternoon among the ruins, and took an evening train to Nauplia, an hour's ride further on. Nauplia [p. 62] forms a convenient centre for two or three days' excursions. It was the first capital of the Greek kingdom. It still retains some remnants of dignity, and possesses an endurable inn.

From Nauplia the traveller drives part of the way, and walks the rest, to the sanctuary and theatre of Epidaurus. This theatre was designed by one of the most famous of the sculptors of Greece, Polycletus, and is preserved in its original form (though without the stage building), with round orchestra. The railroad train from Nauplia carries the traveller conveniently to Argos, where the ancient citadel, Larissa, rises 1,000 feet above the level plain. On the eastern side of this hill are the remains of the seats of the old theatre, famous now as the meeting place of one of the early National Assemblies, in 1829. Argos itself has little of interest to show. The houses are mostly low, of rough stone daubed with mud. In the business part of the town the shops throw open their wooden shutters, and the customer stands in the street to make his purchase. I was there one Saturday morning when the country people came to town with their produce. The market-place was crowded with a motley throng. Lambs and kids, eggs and cheese, and loads of dry shrubs to be used as fuel, were the most important articles brought from the country, while gay kerchiefs for the women's heads, and thread and needles, were exposed to attract buyers.

In Holiday Dress.

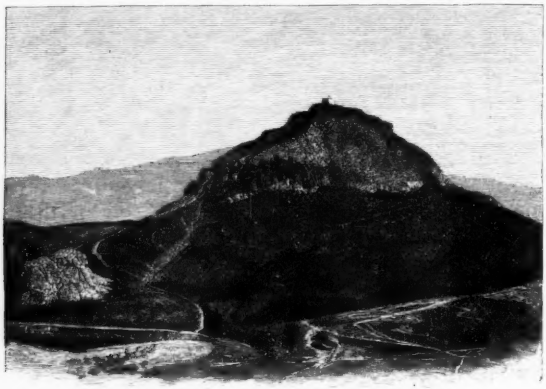
Tiryns, with the most famous ancient walls of Greece, is about half-way between Argos and Nauplia. The railway

station is just across the road from the ruins.

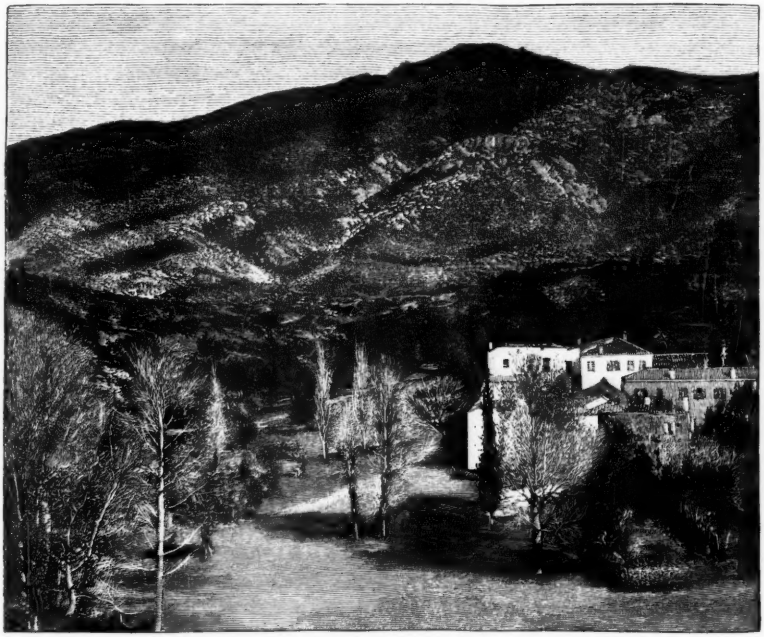
If the traveller desires to see more of Peloponnesus than this glimpse of Argolis, three courses are open to him. He can take a dragoman, who will provide tent, beds, and provisions; in this case he will have more comfort, but will have to pay a larger sum, and will see less of the life of the people. This was the customary mode of travel for foreigners in Greece, as in Palestine, a few years ago.

If the traveller has strength of body and a fair acquaintance with the modern language, and is indifferent to creature comforts, he can see the country and the people to the best advantage by shouldering his knapsack and setting out by himself, trusting to his Bädeker's Guide, his Pausanias, and the courteous hospitality of the people.

Most travellers now prefer a middle course. They hire an agoyiatis (muleteer), who charges a fixed sum per day for himself and his beast, and undertakes to be both guide and assistant. The German archæologists have trained one of these men to unite many of the most valuable qualities of dragoman and agoyiatis. This Angelis Cosmopulos, who was one of the overseers in the excavations at Olympia, has been over the principal routes of Peloponnesus many times. Only once did I know him to be perplexed as to the right path, although the ways were devious and guide-posts are unknown. Angelis knows well where the best accommodations can be found; and where he foresees a barren country, he makes provision of the most necessary stores; but he does not fully comprehend as yet the cravings of an American body. He is trusty and strong, quick as a flash at an emergency; he is handsome, withal;—an ideal William Tell. His face is as thoughtful as if he had more learning. His assistant, Athanasius, was a mercurial little fellow, who was continually showing his beautiful white teeth, which contrasted well with his black whiskers. The horses were not worthy of the men. Their only, but redeeming, virtue was that they were sure-footed. They climbed over rocks like cats, and had excellent judgment as to the best paths. But they bit and kicked everyone (except their riders) who came near them. Horses and dogs are ill-trained in Greece. We were somewhat helpless when seated upon these horses. Our saddles were the Greek pack-saddle, which does not fit the human figure. A loop of rope served as one stirrup; a rope halter was our only bridle. The steeds did not recognize the authority of their riders; they accepted orders only from their masters, who trudged along behind. Our pace was gentle, which afforded us the better opportunity to enjoy the country. But occasionally a fit of zeal would seize our agoyiatis, who would steal up without warning and lash my horse, which unfortunately was accustomed to the last place in the line. My beast naturally tried to press past the other horses, and a conflict arose which seemed to be most fierce and vicious when we were on a specially rough or precipitous part of the path. A favorite amusement of one guide was to wind his whip-lash around the hind legs of my horse; this did not increase his speed, but stimulated him to persevere in his habit of standing on his forelegs.



Mount Lycabettus, behind Athens.



Mount Pentelicus, with the Monastery—The Old Marble Quarries.

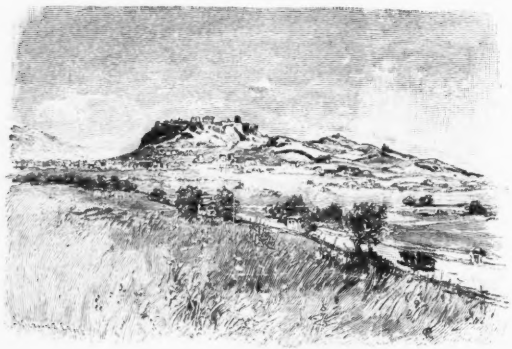
The trip in Peloponnesus may be made in ten days or two weeks, visiting Sparta, Kalamâta on the Messenian Gulf, Navarino (the ancient Pylus), the temple of Apollo at Bassæ, and Olympia. The return to Athens may be made through Arcadia, including a visit to the Styx; or a coasting steamer can be taken from the harbor of Pyrgos, near Olympia; or a carriage may be hired from Pyrgos to Patras, on the Corinthian Gulf, whence the railroad leads direct to Athens.

The journey involves many discomforts and inconveniences, but it affords such a constant succession of new experiences and ever-changing scenery, that even a traveller without archæological tastes and special knowledge of the classics must enjoy it. The material question, "Where shall we sleep?" is generally answered by the advice of the guide-book or the agoyiatis. In the towns a *xenodochion*, or inn, may be found. This is often extremely primitive. The Hotel d'Europe, at Laurium, had three rooms for guests. These were stuffy and dusty. The bed linen certainly had not been ironed, and the suspicion arose that it had not been washed. The host was himself the cook as well as porter. But these were sumptuous accommodations as compared with what is found in many places. The best hotel in Sparta had but one washbowl for its guests, and that was only as large as a good sized soup plate. The street is the ordinary slop jar. Towels are scanty and thin. The traveller needs Persian powder to protect him from vermin. He is served by unkempt boys.

But in the country no inns are to be found. The *khan* is the ordinary place of shelter. These differ greatly. In the rude form, the khan has one large room. In the middle is no floor but the earth. There the fire is built. The smoke finds its way out as best it may, without the guidance of a chimney. The windows have no glass, of course, but wooden shutters. Across one end of the room is built a platform on which lie barrels of wine and a very few other stores. On a similar platform, at the other end of

the room, is spread a rug, or thick "comfortable," for the guests of honor. The shepherds, muleteers, and other passing guests lie, wrapt in their cloaks, on the ground near the fire. Other khans have a room in which the travellers can lie by themselves, on the floor.

When a khan is not available, the traveller is driven to seek the shelter of a private house. In the best dwelling of a hamlet a room, or part of a room, may be assigned to him. At khans and at ordinary private houses he must not expect to find furniture, and forks are often lacking. A small table and two or three rude stools may be brought in. In one neat house we were conducted to an upper room which was absolutely void of furniture and decoration. A matting was brought in and laid upon the floor, and a rug spread above that. Cushions were laid around the edge,



Distant View of Athens, from near Colonus.

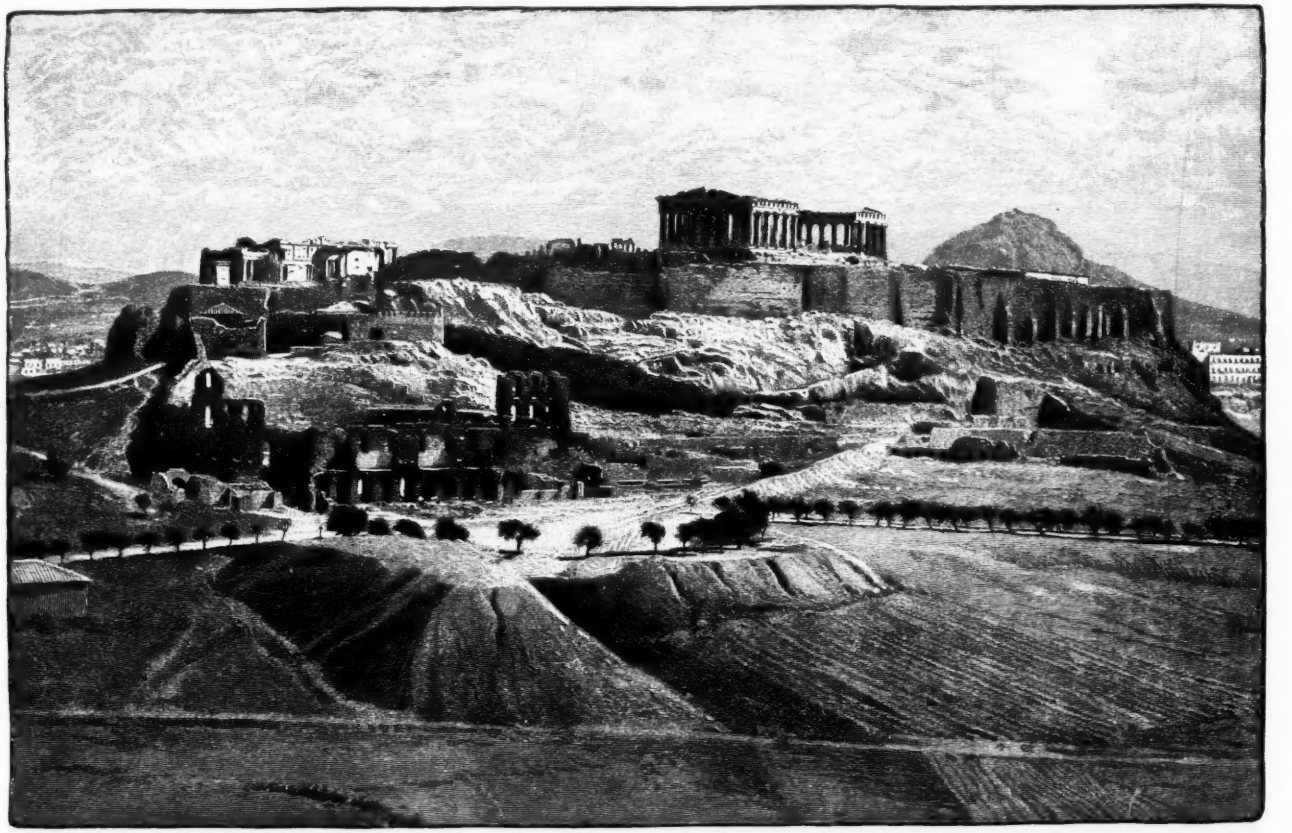
and a table six inches high placed in the centre.

We journeyed once for three days without finding a washbasin. When the traveller asks for water to wash, a wooden, barrel-shaped pitcher is brought. I remember my delight, years ago, in a well-ordered and hospitable home in Thebes, as we came into the parlor in the morning, when a trim serving-maid stepped forward with basin and silver pitcher, to pour water for our ablutions, in true Homeric fashion.

At the noonday halt, cold roast lamb and salad, with bread, cheese, and wine, may be found at some khans. More frequently the bread and cheese, with a hard-boiled egg or two, will form the repast. Sometimes one may lunch with the shepherds; I enjoyed no food in Peloponnesus more than a bowl of bread and warm sheep's milk, high on the hills, at the temple of Apollo at Bassæ, on the western borders of Arcadia. Our bowls and spoons had been carved by the shepherds themselves in their idle moments.

A pleasant trip in Central Greece is from Athens to Thebes, by way of Eleusis, in a single day; thence to Lebadea (the seat of an ancient oracle of Trophonius) and Chæronea (where Philip of Macedon conquered the independent Greeks), and across to Delphi at the foot of Parnassus. The round journey can be made easily in a week, with side excursions here and there. Thessaly and Thermopylæ are now visited easily by means of the coasting steamers.

The railways of Greece are a welcome convenience, and as yet they do not tear the landscape, like some of ours in the White Mountains. They are of narrow gauge, laid with iron bands instead of wooden ties, running up hill and down; when the grade would be too steep they make long detours to avoid deep cuts or high embankments. Only the road from Corinth to Megara is cut out of the rock or built up out of the sea; and this may easily be forgiven, since the view from it, upon and across the Saronic Gulf, to the islands and Peloponnesus, is one of the most charming in Greece. The trains run slowly and quietly. The cars are partly on the American pattern, partly on that of the continental railways. They have three "classes," but most allow a passage within the cars from one end of the train to the other. Some compartments are large, with seats along the side. The railway is still a marvel to the people, who gather at the station to watch the trains, often with the priest (pappás) at their head. The novelty was still at-



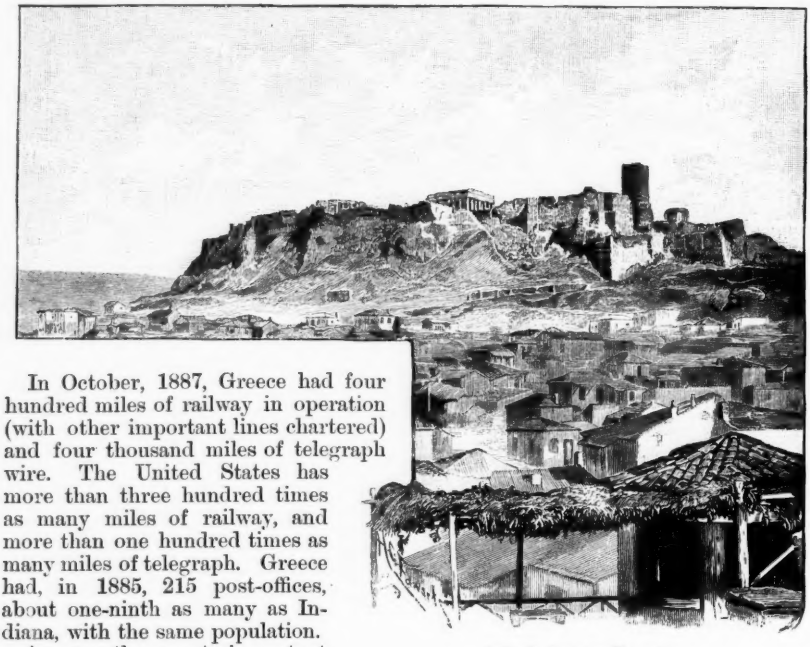
The Acropolis from the Southwest—The Palace on the Extreme Right.

tractive to the officials two years ago. Four men at Corinth busied themselves with my valise, weighed it, made out a receipt in duplicate, made entry in a book, and pasted the label (check). The fee was two cents. They were too busy with this process to allow my baggage to undergo a custom-house examination. At Mycenæ the station agent, who was also baggage-master and switchman, had his unused pencils, pens, and blotters in the neatest order, and was a proud and happy man as he blew his horn to give notice of the approach of the train, and raised his lantern as a signal to the engineer.

In October, 1887, Greece had four hundred miles of railway in operation (with other important lines chartered) and four thousand miles of telegraph wire. The United States has more than three hundred times as many miles of railway, and more than one hundred times as many miles of telegraph. Greece had, in 1885, 215 post-offices, about one-ninth as many as Indiana, with the same population.

Among the most important public works in Greece is the canal through the Isthmus of Corinth, of which General Türr is the De Lesseps. It was begun in 1882, and was to be completed this year, 1888, but it will not be finished for several years yet. It has the same breadth and depth as the Suez Canal, and is about four miles long. The deepest cut is 250 feet. It passes through solid rock, and its sides are as yet left almost vertical. It is to be lighted by electricity. The cost was estimated at seven million dollars. This canal will save vessels from Trieste or Brindisi to Athens or Constantinople about two hundred miles; it will save ships from Gibraltar about seventy-five miles. It has been dug largely by Italians, Turks, and Montenegrins. Few Greeks have been employed; they do not take kindly to such work.

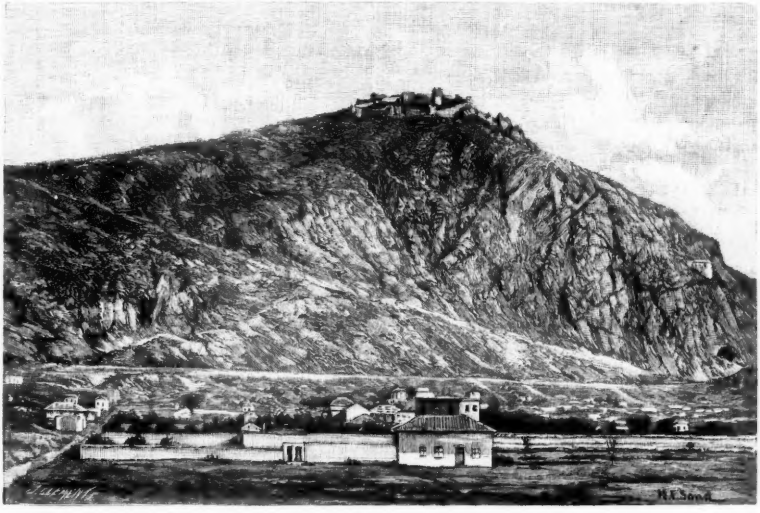
The canal carries out a plan that was cherished by many of the ancients; it actually follows the course which was surveyed by order of the Emperor Nero. No one knows how it will affect the prosperity of the modern town of Corinth,



Acropolis from the Theseum.

which lies several miles away. Far more ships will pass through the gulf, but most will make only a short halt. Corinth is now a railroad centre; the roads from Athens, from Patras on the west, and from Nauplia on the southeast, meet there, but without change of cargo. The advantages of the situation of Corinth, under all circumstances, are very great: it has the sea on both east and

west, and all roads between Northern and Southern Greece meet there. The remains of old Corinth (at the foot of Acrocorinthus, which rises nearly 2,000 feet above the plain) were destroyed by an earthquake thirty years ago. New Corinth was built near the western shore, and is a barren, uninteresting town.



Citadel of Argos.

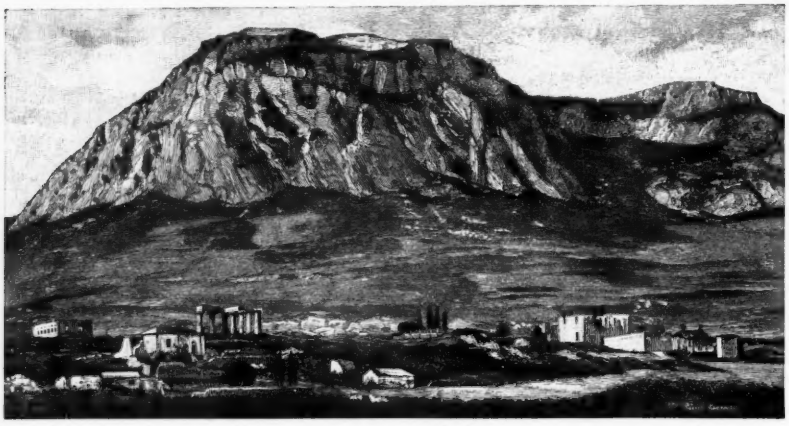
Another important public work is the draining of the Stymphalian Lake in Arcadia, and part of Lake Copaïs in Bœotia. Both of these are connected with the sea by underground channels, which were kept open by the ancients, but which have become clogged. The opening of these passages will make available for tillage a large amount of most fertile land, and remove a fruitful source of malaria from the surrounding country. The drainage of Lake Stymphalus is to be made useful further in the irrigation of the thirsty Argive plain.

The most important trade of Greece is with England. The American trade is insignificant. A cargo of American agricultural implements was a losing venture; but American kerosene oil and sewing-machines are used, and in a little Arcadian shop I saw shelves full of Chicago canned meats and California fruits.

More than one-fifth of the men of Greece (210,000) are peasants; about one-twentieth are shepherds; 34,000 are shopkeepers; 38,000 workmen; 1,700 lawyers; 7,600 government officials; 8,000 priests and monks. The census reckons only about 5,000 women as workwomen. The lawyers naturally are gathered in the towns. Nauplia is said to have one lawyer to every hundred inhabitants! The Greeks do not take kindly to factory life; may they long be preserved from it! They choose to live in the open air. If the lower classes come to America, they will prefer keeping fruit and peanut stands to work in mills or on railroads.

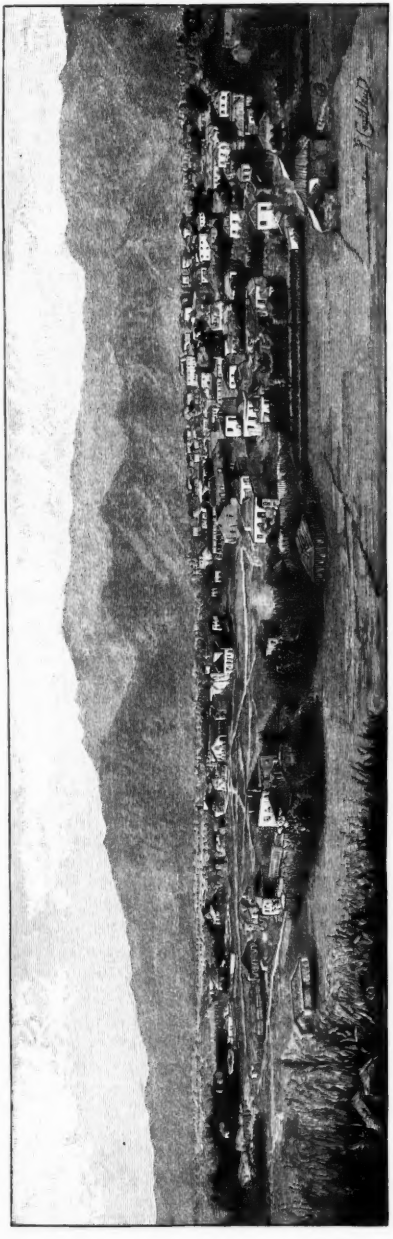
The Greeks are the most frugal and temperate people of Europe. Gluttony and drunkenness are rare vices among them. Their diet is such as it was two thousand years ago. They eat little meat; barley bread, goats' cheese, or black dried olives, and wine make up a bountiful repast. Bread and wine, or bread and leeks, form many a man's dinner. Our agoyiatis munched raw beans with evident relish, as his luncheon. Maize is cultivated in some parts of the country, and is imported from

Italy; but I never saw it properly treated—it is generally eaten half-cooked. A large number of herbs are boiled as "greens," and used in salads. Salt fish are prepared in some districts. Salt is a government monopoly, and is very brown. Olive-oil serves as butter, cream, lard, and suet. The food is generally too oily for an American. Honey is often used (as in ancient times) instead of sugar. Sweet milk is little used, but many preparations of curds are common; curds and sugar (*yaürti*) are made into a toothsome dish. There are many varieties of Greek wine, but almost all are strong and fiery, and are tempered with water when they are drunk. Wine costs only a trifle (about eight cents per quart of excellent quality), but is seldom taken in excess. That used in the country is generally treated with rosin, partly to preserve it, partly as being healthy, partly because the Greeks have become accustomed to it and like it so. Masticha, an anisette liqueur, is a favorite drink. Tea is not used. Coffee is never mixed with milk, but is served black, prepared with the fine grounds. Drinking water is scarce; the lack of it is a discomfort in travelling; the guide-book advises quenching thirst with coffee, soup, and wine! The water at Argos, on a plain, is abominable; but no city in Europe, except Rome and some Swiss towns, is so well watered as Thebes, and Sparta is now abundantly supplied with good water from the mountains. Water for drinking is peddled in Athens, as in some American cities, although fair water is brought in pipes, from the mountains. The bread is much like the black bread of Germany. It is generally baked in public ovens, though sometimes the out-door ovens are to be seen near the houses. Meat is expensive. Most of the beef is imported from the Black Sea. Lamb is the ordinary meat, especially in the season immediately following Lent. Goats' flesh is also used. To the modern as to the ancient Greek, meat is not food, but a relish. Servants often receive from their employers no food but bread and olives.



Acrocorinthus from the East.

But the Greeks are not without their dainties. Rice is much used with meat gravy, making an excellent *pilaff*. Chopped meat is rolled into croquettes, wrapped in young vine leaves, and fried. The best olives are much richer and higher flavored than those sold in America. Rich sweetmeats are prepared from quinces and from other fruit. The offer of some sweetmeats is often among the first attentions paid to a guest. A delightful drink is made from the milk of the green almond. The rose-flavored *lukumi* is hardly equalled by any of our confectionery. In this connection, perhaps, I should mention the Greek tobacco, which is cheap and mild,



Sparta, with Mount Taÿgetus in the Background.

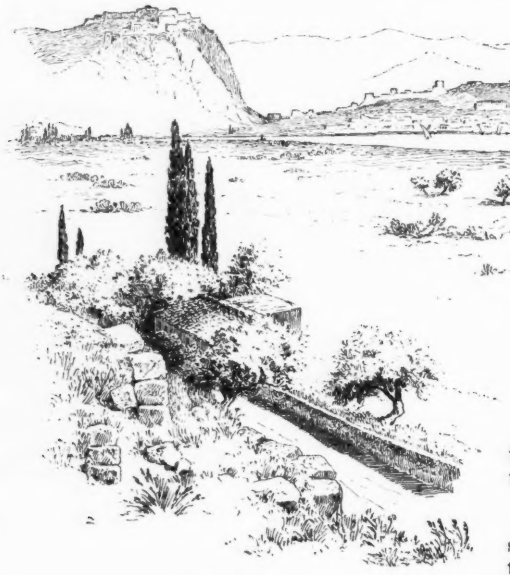
and has a fine flavor. The hubble-bubble *nargilehs* are seen at the cafés, but the Greeks generally smoke only cigarettes, which they roll for themselves very neatly.

In other parts of Europe the poorest classes live as plainly as the Greeks, with as little meat and as few luxuries; but nowhere in Western Europe do the owners of the land through large districts of the country live in such rude houses, with so little furniture and adornment, and on such simple food.

A temperate and frugal life does not conduce to many vices and crimes which are common in hot-blooded southern races. Taken as a whole, the Greeks are a moral and orderly people. The revolution which demanded a constitution and the dismissal of the Bavarians, in 1843, and that which drove away King Otho, in 1862, were both bloodless.

The vegetation of Greece embraces almost every variety of plant and tree, from tropical to arctic. The unbotanical American is pleasantly surprised to recognize so many familiar flowers—daisies, dandelions, violets, poppies, "star of Bethlehem," iris, and the like. Early in the spring the fields are bright with the red anemone, and later the grain fields show many poppies. As we are familiar with fields of daisies or dandelions, and large clumps of golden-rod, so the Greeks see on every hand parti-colored slopes with flowers in thick masses. On the hill which rises above Thoricus I could not step without treading on three or four kinds of flowers. The asphodel, with long branching stalks, is graceful and attractive when in bloom, but dreary when in seed. The pliant acanthus is far more beautiful than its cousin, our thistle. The cytisus, which is a favorite food of the goats, has a rough, thick leaf, but its blossom bears a rude resemblance to our wild roses. Many of the flowers are so aromatic in their fragrance that the honey may well be high flavored. The hills of Attica are covered with thyme.

The most important tree of Greece is the olive, of which there are about one million in the grove near Athens. The vines are becoming more and more important as better processes of making wine are made familiar. The small raisins, known to the trade as currants (from *Corinth*), form more than half of all the exports of the country.



Nauplia, from Tiryns.

Most of the kingdom is sadly lacking in trees. Of European countries, Spain alone is more treeless than Greece. Many districts are now bare which were well wooded in classical times; while Plato saw clear indications that many mountains which were bare in his day had been covered once with forests. In the hot, dry summers, many a great fire is caused by the carelessness of the shepherds; while this devastation is often charged upon the goatherds, whose goats love to browse on the young twigs which grow up after a fire. Monks have been accused of inciting the burning of some forests, in revenge for the expropriation of lands. At any rate, the forests have gone, and so much of the soil has been washed from the mountains, that trees can hardly find a foothold. The government endeavors to protect the trees, but its forestry force of seven hundred men is too small, and the laws are not sustained by the sentiment of the rural communities. But while Attica has only one forest remaining, in Western Arcadia I rode for five hours through a thick wood of pines and firs, where not a shepherd's flock or hut was to be seen for the whole distance, and in Northwestern Greece are other large districts given up to woods. Even in Attica, in favored, well-watered spots, the great plane-trees are luxuriant.

The traveller is often rudely shocked by the contrast between the reality of the present and the ideal picture of the ancient Arcadian life of the rural districts or the intellectual and artistic life of Athens. But doubtless if we could be transported back to Ancient Greece, we should find much that would not please us in the daily life of the people. Men may say, "'Tis Greece, but living Greece no more;" it is still an enchanted land for me. No other civilized country withdraws the visitor so far from the ordinary routine of the present; no other land affords so many suggestions of the life of the ancients from whom our civilization comes. I am sure that I understand Greek art better because of my life for a few weeks under the Athenian sky. A few days in Peloponnesus, and a few more in Central Greece, gave me a clearer comprehension of Greek political history. The Homeric age seems more of a reality after a study of the ruins of Tiryns and Mycenæ. The pastorals of Theocritus

have new life and meaning when the traveller hears the shepherd's pipe and rustic singers vie in amoebean strains, while he eats bread and milk from the wooden bowls which his hosts have carved.

A few of the ancient customs survive. The lover of Homer is delighted to find that the Greeks still throw back the head to express dissent or refusal, and that the trim maid still pours water on the visitor's hands. Some old superstitions have remained, notably that of telling a disturbing dream to the rising sun in order that the threatened ill may be averted. No land is more thickly peopled with fairies and every kind of benevolent and malignant spirits, than the Greece of today. Doubtless many of the ecclesiastical customs of the present have been moulded by the superstitions of the past.

Greek Mountaineers.

Living in the midst of the same surroundings, with the same climate, the same needs, and the same occupations, the Greeks have retained many of the peculiarities of their ancestors. The foreign blood which runs in their veins has been thoroughly assimilated. They are still hospitable, democratic, fond of politics and of discussion, divided in factions, eager for information, quick to adapt themselves to circumstances, patient of suffering, but disinclined to labor.

SOLITUDE.

By Arlo Bates.

One sought a place to do a crime
So lone not even God should be aware.
God gave his wish and drew aloof;
Yet not alone he found himself in proof,
Since his own soul was there!

A LONDON LIFE.

By Henry James.

PART SECOND.

V.

AND are you telling me the perfect truth when you say that Captain Crispin was not there?"

"The perfect truth?" Mrs. Berrington straightened herself to her height, threw back her head and measured her interlocutress up and down; this was one of the many ways in which it is to be surmised that she knew she looked very handsome indeed. Her interlocutress was her sister, and even in a discussion with a person long since under the charm she was not incapable of feeling that her beauty was a new advantage. On this occasion she had at first the air of depending upon it mainly to produce an effect upon Laura; then, after an instant's reflection, she determined to arrive at her result in another way. She exchanged her expression of scorn (of resentment at her veracity being impugned) for a look of gentle amusement; she smiled patiently, as if she remembered that of course Laura couldn't understand of what an impertinence she had been guilty. There was a quickness of perception and lightness of hand which, to her sense, her American sister had never acquired; the girl's earnest, almost barbarous probity blinded her to the importance of certain pleasant little forms. "My poor child, the things you do say! One doesn't put a question about the perfect truth in a manner that implies that a person is telling a perfect lie. However, as it's only you, I don't mind satisfying your clumsy curiosity. I haven't the least idea whether Captain Crispin was there or not. I know nothing of his movements, and he doesn't keep me informed—why should he, poor man? —of his whereabouts. He was not there for me—isn't that all that need interest you? As far as I was concerned he might have been at the North Pole. I neither saw him nor heard of him. I didn't see the end of his nose!" Selina continued, still with her wiser, tolerant brightness, looking straight into her sister's eyes. Her own were clear and lovely, and she was but little less handsome than if she had been proud and freezing. Laura wondered at her more and more; stupefied suspense was now almost the girl's constant state of mind.

Mrs. Berrington had come back from Paris the day before, but had not proceeded to Mellows the same night, though there was more than one train she might have taken. Neither had she gone to the house in Grosvenor Place, but had spent the night at an hotel. Her husband was absent again—he was supposed to be in Grosvenor Place, and they had not yet met. Little as she was a woman to admit that she had been in the wrong, she was known to have granted, later, that at this moment she had made a mistake in not going straight to her own house. It had given Lionel a sort of advantage—made it appear, perhaps, a little, that she had a bad conscience and was afraid to face him. But she had had her reasons for putting up at an hotel, and she didn't think it necessary to express them very definitely. She came home by a morning train, the second day, and arrived before luncheon, of which meal she partook in the company of her sister and in that of Miss Steet and the children, sent for in honor of the occasion. After luncheon she let the governess go, but kept Scratch and Parson—kept them on ever so long, in the morning-room, where she remained; longer than she had ever kept them before. Laura was conscious that she ought to have been pleased at this, but there was a perversity even

in Selina's manner of doing right; for she wished immensely, now, to see her alone—she had something so serious to say to her. Selina hugged her children repeatedly, and encouraged their sallies; she laughed extravagantly at the artlessness of their remarks, and at table Miss Steet was quite abashed by her unusual high spirits. Laura couldn't question her about Captain Crispin and Lady Ringrose while Geordie and Ferdy were there; they wouldn't understand, of course, but names were always reflected in their clear little minds and they gave forth the image later—often in the most extraordinary connections. It was as if Selina knew what she was waiting for and were determined to make her wait. The girl wished her to go to her room, that she might follow her there. But Selina showed no disposition to retire, and one could never entertain the idea for her, on any occasion, that it would be suitable that she should change her dress. The dress she wore —whatever it was—was too becoming to her, and to the moment, for that. Laura noticed how the very folds of her garment told that she had been to Paris; she had spent only a week there, but the mark of her *couturière* was all over her; it was simply to confer with this great artist that, from her own account, she had crossed the Channel. The signs of the conference were so conspicuous that it was if she had said, "Don't you see the proof that it was for nothing but *chiffons?*" She walked up and down the room with Geordie in her arms, in an access of maternal tenderness; he was very much too big to nestle gracefully in her bosom, but that only made her seem younger, more flexible, fairer in her tall, strong slimness. Her lovely figure bent itself hither and thither, but always in perfect freedom, as she romped with her children; and there was another moment, when she came slowly down the room, holding one of them in each hand and singing to them, while they looked up at her beauty, charmed and listening and a little surprised at such new ways—a moment when she might have passed for some grave, antique statue of a young matron, or even for a picture of Saint Cecilia. This morning, more than ever, Laura was struck with her air of youth, the wonderful unfatigued freshness that would have made anyone exclaim at her being the mother of such bouncing little boys. Laura had always admired her, thought her the prettiest woman in London, the beauty with the finest points; and now these points were so vivid (especially her finished slenderness, and the grace, the natural elegance of every turn—the fall of her shoulders had never looked so perfect) that the girl almost detested them: they appeared to her a kind of advertisement of danger and even of shame.

Miss Steet at last came back for the children, and as soon as she had taken them away Selina remarked that she would go over to Plash—just as she was; she rang for her hat and jacket and for the carriage. Laura could see that she wouldn't give her just yet the advantage of a retreat to her room. The hat and jacket were quickly brought, but after they were put on Selina kept the maid in the drawing-room, talking to her a long time, telling her, elaborately, what she wished to have done with the things she had brought from Paris. Before the maid departed the carriage was announced, and the servant, leaving the door of the room open, hovered within earshot. Laura then, losing patience, turned out the maid and closed the door; she stood before her sister, who was prepared for her drive. Then she asked her, abruptly, fiercely, but coloring with her question, whether Captain Crispin had been in Paris. We have heard Mrs. Berrington's answer, with which her strenuous sister was imperfectly satisfied; a fact the perception of which it doubtless was that led Selina to break out, with a greater show of indignation: "I never heard of such extraordinary ideas for a girl to have, and such extraordinary things for a girl to talk about! My dear, you have acquired a freedom—you have emancipated yourself from conventionality—and I suppose I must congratulate you." Laura only stood there, with her eyes fixed, without answering this sally, and Selina went on, with another change of tone: "And pray if he *was* there, what is there so monstrous? Hasn't it happened that he is in London when I am there? Why is

it then so awful that he should be in Paris?"

"Awful, awful, too awful," murmured Laura, with intense gravity, still looking at her, and looking all the more fixedly that she knew Selina didn't like it.

"My dear, you do indulge in a style of innuendo, for a respectable young woman——!" Mrs. Berrington exclaimed, with an angry laugh. "You have ideas that when I was a girl——" She paused, and her sister saw that she hadn't the assurance to finish her sentence on that particular note.

"Don't talk about my innuendoes and my ideas—you might remember those in which I have heard you indulge! Ideas? what ideas did I ever have before I came here?" Laura Wing asked, with a trembling voice. "Don't pretend to be shocked, Selina; that's too cheap a defence. You have said things to me—if you choose to talk of freedom! What is the talk of your house, and what does one hear if one lives with you? I don't care what I hear now (it's all odious, and there's little choice, and my sweet sensibility has gone God knows where!) and I'm very glad if you understand that I don't care what I say. If one talks about your affairs, my dear, one mustn't be too particular!" the girl continued, with a flash of passion.

Mrs. Berrington buried her face in her hands. "Merciful powers, to be insulted, to be covered with outrage, by one's wretched little sister!" she moaned.

"I think you should be thankful there is one human being—however wretched—who cares enough for you to care about the truth in what concerns you," Laura said. "Selina, Selina—are you hideously deceiving us?"

"Us?" Selina repeated, with a singular laugh. "Whom do you mean by us?"

Laura Wing hesitated; she had asked herself whether it would be best she should let her sister know the dreadful scene she had had with Lionel; but she had not, in her mind, settled that point. However, it was settled now, in an instant. "I don't mean your friends—those of them that I have seen. I don't think *they* care a straw—I have never seen such people. But last week Lionel spoke to me—he told me he *knew* it, as a certainty."

"Lionel spoke to you?" said Mrs. Berrington, holding up her head with a stare. "And what is it that he knows?"

"That Captain Crispin was in Paris and that you were with him. He believes you went there to meet him."

"He said this to *you?*"

"Yes, and much more—I don't know why I should make a secret of it."

"The disgusting beast!" Selina exclaimed, slowly, solemnly. "He enjoys the right—the legal right—to pour forth his vileness upon *me;* but when he is so lost to every feeling as to begin to talk to you in such a way——!" And Mrs. Berrington paused, in the extremity of her disapproval.

"Oh, it wasn't his talk that shocked me—it was his believing it," the girl replied. "That, I confess, made an impression on me."

"Did it indeed? I'm infinitely obliged to you! You are a tender, loving little sister."

"Yes, I am, if it's tender to have cried about you—all these days—till I'm blind and sick!" Laura replied. "I hope you are prepared to meet him. His mind is quite made up to apply for a divorce."

Laura's voice almost failed her as she said this—it was the first time that, in talking with Selina, she had uttered that horrible word. She had heard it, however, often enough on the lips of others; it had been bandied, lightly enough, in her presence, under those somewhat austere ceilings of Mellows, of which the admired decorations and mouldings, in the taste of the middle of the last century, all in delicate plaster and reminding her of Wedgewood pottery, consisted of slim festoons, urns and trophies and knotted ribbons, so many symbols, somehow, of domestic affection and irrevocable union. Selina herself had flashed it at her, with light superiority, as if it were some precious jewel, kept in reserve, which she could convert at any moment into specie, so that it would constitute a happy provision for her future. The idea—associated with her own point of view—was apparently too familiar to Mrs. Berrington to be the cause of her changing color; it struck her indeed, as presented by Laura, in a ludicrous light, for her pretty eyes expanded a moment and she smiled pity-

ingly. "Well, you are a poor dear innocent, after all. Lionel would be about as able to divorce me—even if I were the most abandoned of my sex—as he would be to write a poem."

"I know nothing about that," said Laura.

"So I perceive—as I also perceive that you must have shut your eyes very tight. Should you like to know a few of the reasons—heaven forbid I should attempt to go over them all; there are millions!—why his hands are tied?"

"Not in the least."

"Should you like to know that his own life is too vile for words, and that his impudence in talking about me would be sickening if it weren't grotesque?" Selina went on, with increasing emotion. "Should you like me to tell you to what he has stooped—to the very gutter—and the charming history of his relations with——"

"No, I don't want you to tell me anything of the sort," Laura interrupted. "Especially as you were just now so pained by the license of my allusions."

"You listen to him, then—but it suits your purpose not to listen to me!"

"Oh, Selina, Selina!" the girl almost shrieked, turning away.

"Where have your eyes been, or your senses, or your powers of observation? You can be clever enough when it suits you!" Mrs. Berrington continued, throwing off another ripple of derision. "And now, perhaps, as the carriage is waiting, you will let me go about my duties."

Laura turned again and stopped her, holding her arm as she passed toward the door. "Will you swear—will you swear by everything that is most sacred?"

"Will I swear what?" And now she thought Selina visibly blanched.

"That you didn't lay eyes on Captain Crispin in Paris."

Mrs. Berrington hesitated, but only for an instant. "You are really too odious, but as you are pinching me to death I will swear, to get away from you. I never laid eyes on him."

The organs of vision which Mrs. Berrington was ready solemnly to declare that she had not misapplied were, as her sister looked into them, an abyss of indefinite prettiness. The girl had sounded them before without discovering a conscience at the bottom of them, and they had never helped any one to find out anything about their possessor except that she was one of the beauties of London. Even while Selina spoke Laura had a cold, horrible sense of not believing her, and at the same time a desire, colder still, to extract a reiteration of the pledge. Was it the asseveration of her innocence that she wished her to repeat, or only the attestation of her falsity? One way or the other it seemed to her that she should settle something, and she went on, inexorably—"By our dear mother's memory—by our poor father's?"

"By my mother's, by my father's," said Mrs. Berrington, "and by that of any other member of the family you like!" Laura let her go; she had not been pinching her, as Selina described the pressure, but had clung to her with insistent hands. As she opened the door Selina said, in a changed voice: "I suppose it's no use to ask you if you care to drive to Plash."

"No, thank you, I don't care—I shall take a walk."

"I suppose, from that, that your friend Lady Davenant has gone."

"No, I think she is still there."

"That's a bore!" Selina exclaimed, as she went off.

VI.

Laura Wing hastened to her room to prepare herself for her walk; but when she reached it she simply fell on her knees, shuddering, beside her bed. She buried her face in the soft counterpane of wadded silk; she remained there a long time, with a kind of aversion to lifting it again to the day. It burned with horror, and there was coolness in the smooth glaze of the silk. It seemed to her that she had been concerned in a hideous transaction, and her uppermost feeling was, strangely enough, that she was ashamed, not of her sister, but of herself. She didn't believe her—that was at the bottom of everything, and she had made her lie, she had brought out her perjury, she had associated it

with the sacred images of the dead. She took no walk, she remained in her room, and quite late, towards six o'clock, she heard on the gravel, outside of her windows, the wheels of the carriage bringing back Mrs. Berrington. She had evidently been elsewhere as well as to Plash; no doubt she had been to the vicarage—she was capable even of that. She could pay "duty-visits," like that (she called at the vicarage about three times a year), and she could go and be nice to her mother-in-law, with her fresh lips still fresher for the lie she had just told. For it was as definite as an aching nerve to Laura that she didn't believe her, and if she didn't believe her the words she had spoken were a lie. It was the lie, the lie to *her*, and which she had dragged out of her, that seemed to the girl the ugliest thing. If she had admitted her folly, if she had explained, attenuated, sophisticated, there would have been a difference in her favor; but now she was bad because she was hard. And she could make plans and calculate, she could act and do things for a particular effect. She could go straight to old Mrs. Berrington and to the parson's wife and his five daughters (just as she had kept the children after luncheon, on purpose, so long) because that looked innocent and domestic and denoted a mind without a feather's weight upon it.

A servant came to the young lady's door to tell her that tea was ready; and on her asking who else was below (for she had heard the wheels of a second vehicle, just after Selina's return), she learned that Lionel had come back. At this news she requested that some tea should be brought to her room—she determined not to go to dinner. When the dinner-hour came she sent down word that she had a headache, that she was going to bed. She wondered whether Selina would come to her (she could forget disagreeable scenes amazingly); but her fervent hope that she would stay away was gratified. Indeed she would have another call upon her attention, if her meeting with her husband was half as much of a concussion as was to have been expected. Laura had found herself listening hard, after knowing that her brother-in-law was in the house; she half expected to hear indications of violence—loud cries or the sound of a scuffle. It was a matter of course to her that some dreadful scene had not been slow to take place, something that discretion should keep her out of, even if she had not been too sick. She didn't go to bed—partly because she didn't know what might happen in the house. But she was restless also for herself; things had reached a point when it seemed to her that she must make up her mind. She left her candles unlighted—she sat up till the small hours, in the glow of the fire. What had been settled by her scene with Selina was that worse things were to come (looking into her fire, as the night went on, she had a rare prevision of the catastrophe that hung over the house), and she considered, or tried to consider, what it would be best for her, in anticipation, to do. The first thing was to take flight.

It may be related, without delay, that Laura Wing did not take flight, and that, though the circumstance detracts from the interest that should be felt in her character, she did not even make up her mind. That was not so easy, when action had to ensue. At the same time, she had not the excuse of a conviction that by not acting—that is, by not withdrawing from her brother-in-law's roof—she should be able to hold Selina up to her duty, to drag her back into the straight path. The hopes connected with that project were now a phase that she had left behind her; she had not, to-day, an illusion about her sister large enough to cover a sixpence. She had passed through the period of superstition, which had lasted the longest—the time when it seemed to her (as at first) a kind of profanity to doubt of Selina and judge her, the elder sister whose beauty and success she had ever been proud of, and who carried herself (though with the most good-natured fraternizings) as one native to an upper air. She had called herself, in moments of early penitence for irrepressible suspicion, a little presumptuous prig; so strange did it seem to her at first, the impulse of criticism in regard to her bright protectress. But the revolution was over, and she had a desolate, lonely freedom which struck her as not the most cynical thing

in the world only because Selina's behavior was more so. She supposed she should learn, though she was afraid of the knowledge, what had passed between that lady and her husband while her vigil ached itself away. But it appeared to her the next day, to her surprise, that nothing was changed in the situation, save that Selina knew at present how much more she was suspected. As this had not a chastening effect upon Mrs. Berrington nothing had been gained by Laura's appeal to her. Whatever Lionel had said to his wife he said nothing to Laura; he left her at perfect liberty to forget the subject he had opened up to her so luminously. This was very characteristic of his good-nature; it had come over him that, after all, she wouldn't like it, and if the free use of the gray ponies could make up to her for the shock, she might order them every day in the week and banish the unpleasant conversation from her mind.

Laura ordered the gray ponies very often; she drove herself all over the country. She visited not only the neighboring but the distant poor, and she never went out without stopping for one of the vicar's five daughters. Mellows was now half the time full of visitors, and when it was not its master and mistress were staying with their friends, either together or singly. Sometimes (almost always when she was asked) Laura Wing accompanied her sister, and on two or three occasions she paid an independent visit. Selina had often told her that she wished her to have her own friends, and the girl now felt a great desire to show her that she had them. She had arrived at no decision whatever; she had embraced, in intention, no particular course of action. She drifted on, shutting her eyes, averting her head and, as it seemed to herself, hardening her heart. This admission will doubtless suggest to the reader that she was a weak, inconsequent, spasmodic young person, with a standard not really, or at any rate not continuously, high; and I have no desire that she shall appear anything but what she was. It must even be related of her that since she could not escape and live in lodgings and paint fans (there were reasons why this combination was impossible) she determined to try and be happy in the given circumstances—to float in shallow water. She gave up the attempt to understand the queer *modus vivendi* at which her companions seemed to have arrived; she knew it was not final, but it served them sufficiently for the time, and if it served them why shouldn't it serve her, the dependent, impecunious, tolerated little sister, representative of the class whom it behoved above all to mind their own business? The time was coming round when they would all move up to town, and there, in the crowd, with the added movement, the strain would be less and indifference easier.

Whatever Lionel had said to his wife that evening, she had found something to say to him: that Laura could see, though not so much from any change in the simple expression of his little red face and in the vain bustle of his existence, as from the grand manner in which Selina now carried herself. She was "smarter" than ever, and her waist was smaller, and her back straighter, and the fall of her shoulders finer; her long eyes were more oddly charming, and the extreme detachment of her elbows from her sides conduced still more to the exhibition of her beautiful arms. So she floated, with a serenity not disturbed by a general lateness, through the interminable succession of her engagements. Her photographs were not to be purchased in the Burlington Arcade—she had kept out of that; but she looked more than ever as they would have represented her if they had been obtainable there. There were times when Laura thought her brother-in-law's formless desistence too frivolous for nature; it even gave her a sense of deeper dangers. It was as if he had been digging away in the dark and they would all tumble into the hole. It happened to her to ask herself whether the things he had said to her the afternoon he came to her in the schoolroom had not all been blind folly, or brandy and soda, which came to the same thing. However this might be, she was obliged to recognize that the impression of brandy and soda had not again been given her. More striking still, however, was Selina's capacity to recover from shocks and condone imputations; she kissed again—kissed Laura

—without tears, and proposed problems connected with the rearrangement of trimmings and of the flowers at dinner, as candidly—as earnestly—as if there had never been a sharper question between them. Captain Crispin was not mentioned; much less, of course, so far as Laura was concerned, was he seen. But Lady Ringrose appeared; she came down, once, for two days, during an absence of Lionel's. Laura, to her surprise, found her no such Jezebel, but a clever little woman with a single eyeglass and short hair, who had read Lecky and could give her useful hints about water-colors; a tolerance that encouraged the girl, for this was the direction in which it now seemed to her best that she herself should grow.

VII.

In Grosvenor Place, on Sunday afternoon, during the first weeks of the Season, Mrs. Berrington was usually at home; this, indeed, was the only time when a visitor who had not made an appointment could hope to be admitted to her presence. Very few hours in the twenty-four did she spend in her own house. Gentlemen calling on these occasions rarely found her sister: Mrs. Berrington had the field to herself. It was understood between the pair that Laura should take this time for going to see her old women; it was in this manner that Selina qualified the girl's independent social resources. The old women, however, were not a dozen in number; they consisted mainly of Lady Davenant and the elder Mrs. Berrington, who had a house in Portman Street. Lady Davenant lived at Queen's Gate, and also was usually at home of a Sunday afternoon; her visitors were not all men, like Selina Berrington's, and Laura's maidenly bonnet was not a false note in her drawing-room. Selina liked her sister, naturally enough, to make herself useful, but of late, somehow, they had grown rarer, the occasions that depended in any degree upon her aid, and she had never been much appealed to—though it would have seemed natural she should be—on behalf of the weekly circle of gentlemen. It came to be recognized on Selina's part that nature had dedicated her more to the relief of old women than to that of young men. Laura had a distinct sense of interfering with the free interchange of anecdote that went on at her sister's fireside; the anecdotes were mostly such an immense secret that they couldn't be told fairly if she were there, and she had their privacy on her conscience. There was an exception, however; when Selina expected Americans she naturally asked her to stay at home; not, apparently, so much because their conversation would be good for her as because hers would be good for them.

One Sunday, about the middle of May, Laura Wing prepared herself to go and see Lady Davenant, who had made a long absence from town at Easter, but who would now have returned. The weather was charming, she had from the first established her right to tread the London streets alone (if she was a poor girl she could have the detachment as well as the helplessness of it) and she promised herself the pleasure of a walk along the park, where the new grass was bright. A moment before she quitted the house her sister sent for her to the drawing-room; the servant gave her a note scrawled in pencil: "That man from New York is here—Mr. Wendover, who brought me the introduction the other day from the Schoolings. He's rather a dose—you must positively come down and talk to him. Take him out with you if you can." The description was not alluring, but Selina had never made a request of her to which the girl had not instantly responded: it seemed to her she was there for that. She joined the circle in the drawing-room and found that it consisted of five persons, one of whom was Lady Ringrose. Lady Ringrose was at all times and in all places a fitful apparition; she had described herself to Laura, during her visit at Mellows, as "a bird on the branch." She had no fixed habit of receiving on Sunday, she was in and out as she liked, and she was one of the few specimens of her sex who, in Grosvenor Place, ever turned up, as she said, on the occasions to which I allude. Of the three gentlemen two were known to Laura; she could have told you at

least that the big one, with the red hair, was in the Guards and the other in the Rifles; the latter looked like a rosy child, and as if he ought to be sent up to play with Scratch and Parson: his social nickname, indeed, was the Baby. Selina's admirers were of all ages—they ranged from infants to octogenarians.

She introduced the third gentleman to her sister; a tall, fair, slender young man, who suggested that he had made a mistake in the shade of his tight, perpendicular coat, ordering it of too light a blue. This added, however, to the candor of his appearance, and if he was a dose, as Selina had described him, he could only operate beneficently. There were moments when Laura's heart rather yearned towards her countrymen, and now, though she was preoccupied and a little disappointed at having been detained, she tried to like Mr. Wendover, whom her sister had compared invidiously, as it seemed to her, with her other companions. It struck her that his surface, at least, was as glossy as theirs. The Baby, whom she remembered to have heard spoken of as a dangerous flirt, was in conversation with Lady Ringrose, and the guardsman with Mrs. Berrington; so she did her best to entertain the American visitor, as to whom any one could easily see (she thought) that he had brought a letter of introduction—he wished so to maintain the credit of those who had given it to him. Laura scarcely knew these people, American friends of her sister, who had spent a period of festivity in London and gone back across the sea before her own advent; but Mr. Wendover gave her all possible information about them. He lingered upon them, returned to them, corrected statements he had made at first, discoursed upon them, in short, earnestly and exhaustively. He seemed to fear to leave them, lest he should find nothing again so good, and he indulged in a parallel that was almost elaborate between Miss Fanny and Miss Katie. Selina told her sister afterwards that she had overheard him—that he talked of them as if he had been a nursemaid; upon which Laura defended the young man even to extravagance. She reminded her sister that people in London were always saying Lady Mary and Lady Susan; why then shouldn't Americans use the Christian name, with the humbler prefix with which they had to content themselves? There had been a time when Mrs. Berrington had been happy enough to be Miss Lina, even though she was the elder sister; and the girl liked to think there were still old friends—friends of the family, at home, for whom, even should she live to sixty years of spinsterhood, she would never be anything but Miss Laura. This was as good as Donna Anna or Donna Elvira; English people could never call people as other people did, for fear of resembling the servants.

Mr. Wendover was very attentive, as well as communicative; however his letter might be regarded in Grosvenor Place he evidently took it very seriously himself; but his eyes wandered considerably, none the less, to the other side of the room, and Laura felt that though he had often seen persons like her before (not that he betrayed this too crudely), he had never seen any one like Lady Ringrose. His glance rested also on Mrs. Berrington, who, to do her justice, didn't show, by the way she returned it, that she wished her sister to get him out of the room. Her smile was particularly pretty on Sunday afternoons, and he was welcome to enjoy it, as a part of the decoration of the place. Whether or no the young man should prove interesting, he was at any rate interested; indeed she afterwards learned that what Selina deprecated in him was the fact that he would eventually display a fatiguing intensity of observation. He would be one of the sort who noticed all kinds of little things—things she never saw or heard of—in the newspapers or in society, and would call upon her (a dreadful prospect), to explain or even to defend them. She hadn't come there to explain England to the Americans; the more particularly as her life had been a burden to her during the first years of her marriage through her having to explain America to the English. As for defending England to her countrymen she had much rather defend it *from* them; there were too many—too many for those who were already there. This was the class she wished to spare—she

didn't care about the English. They could obtain an eye for an eye, and a cutlet for a cutlet, by going over there; which she had no desire to do—not for all the cutlets in Christendom!

When Mr. Wendover and Laura had at last cut loose from the Schoolings he let her know, confidentially, that he had come over really to see London: he had time, that year; he didn't know when he should have it again (if ever, as he said) and he had made up his mind that this was about the best use he could make of four months and a half. He had heard so much of it; it was talked of so much to-day; a man felt as if he ought to know something about it. Laura wished the others could hear that—that England was coming up, was making her way at last to a place among the topics of societies more universal. She thought Mr. Wendover, after all, remarkably like an Englishman, in spite of his saying that he believed she had resided in London quite a time. He talked a great deal about things being characteristic, and wanted to know, lowering his voice to make the inquiry, whether Lady Ringrose were not particularly so. He had heard of her very often, he said; and he observed that it was very interesting to see her; he couldn't have used a different tone if he had been speaking of the prime minister or the laureate. Laura didn't know what he had heard of Lady Ringrose; she doubted whether it could be the same as what she had heard from her brother-in-law: if this had been the case he wouldn't have mentioned it. She foresaw that his friends in London would have a good deal to do in the way of telling him whether this or that were characteristic or not; he would go about in much the same way that English travellers did in America, fixing his attention mainly on society (he let Laura know that this was especially what he wished to go into) and neglecting the antiquities and sights, quite as if he didn't believe in their importance. He would ask questions it was impossible to answer; as to whether, for instance, society were very different in the two countries. If you said yes you gave a wrong impression, and if you said no you didn't give a right one; that was the kind of thing that Selina had suffered from. Laura found her new acquaintance, on the present occasion and later, more philosophically analytic of his impressions than those of her countrymen she had hitherto encountered in her new home: the latter, in regard to such impressions, usually exhibited either a profane levity or a tendency to romantic mawkishness.

Mrs. Berrington called out at last to Laura that she must not stay, if she had prepared herself to go out; whereupon the girl, having nodded and smiled good-bye at the other members of the circle, took a more formal leave of Mr. Wendover—expressed the hope, as an American girl does in such a case, that they should see him again. Selina asked him to come and dine, three days later; which was as much as to say that relations might be suspended till then. Mr. Wendover took it so, and having accepted the invitation, he departed at the same time as Laura. He passed out of the house with her, and in the street she asked him which way he was going. He was too tender, but she liked him; he didn't deal in chaff, and that was a change that relieved her—she had so often had to pay out that coin when she felt wretchedly poor. She hoped he would ask her leave to go with her the way she was going—and this not on particular but on general grounds. It would be American, it would remind her of old times, and she should like him to be as American as that. There was no reason for her taking so quick an interest in his nature, inasmuch as she hadn't fallen under his spell; but there were moments when she felt a whimsical desire to be reminded of the way people felt and acted at home. Mr. Wendover didn't disappoint her, and the bright chocolate-colored vista of the Fifth Avenue seemed to surge before her as he said, "May I have the pleasure of making my direction the same as yours?" and moved round, systematically, to take his place between her and the curbstone. She had never walked much with young men in America (she had been brought up in the new school, the school of attendant maids and the avoidance of certain streets) and she had very often done so in England, in the country; yet, as at the top

of Grosvenor Place she crossed over to the park, proposing they should take that way, the breath of her native land was in her nostrils. It was certainly only an American who could have the tension of Mr. Wendover; his solemnity almost made her laugh, just as her eyes grew dull when people "slanged" each other, hilariously, in her sister's house; but at the same time he gave her a feeling of high respectability. It would be respectable still if she were to go on with him indefinitely—if she never were to come home at all. He asked her after a while, as they went, whether he had violated the custom of the English in offering her his company; whether in that country a gentleman might walk with a young lady—the first time he saw her—not because their roads lay together but for the sake of the walk.

"Why should it matter to me whether it is the custom of the English? I am not English," said Laura Wing. Then her companion explained that he only wanted a general guidance—that with her (she was so kind) he had not the sense of having taken a liberty. The point was simply—and rather comprehensively and strenuously he began to set forth the point. Laura interrupted him; she said she didn't care about it, and he almost irritated her by telling her she was kind. She was, but she was not pleased at its being recognized so soon; and he was still too heavy when he asked her whether she continued to go by American usage, didn't find that if one lived there one had to conform in a great many ways to the English. She was weary of the perpetual comparison, for she not only heard it from others—she heard it a great deal from herself. She held that there were certain differences you felt, if you belonged to one or the other nation, and that was the end of it; there was no use trying to express them. Those you *could* express were not real, or not important ones, and were not worth talking about. Mr. Wendover asked her if she liked English society and if it was superior to American, and if the tone were very high in London; she thought his questions "academic"—the term she used to see applied in the *Times* to certain speeches in Parliament. Bending his long leanness over her (she had never seen a man so slim; his waist was almost as small as Selina's, and evidently he was not squeezed) and walking almost sidewise, to give her a proper attention, he struck her as innocent, as incapable of guessing that she had had a certain observation of life. They were talking about totally different things; English society, as he asked her judgment upon it and she had happened to see it, was an affair that he didn't suspect. If she were to give him that judgment it would be more than he, doubtless, bargained for; but she wouldn't do it to make him open his eyes—only to relieve herself. She had thought of that before, in regard to two or three persons she had met—of the satisfaction of breaking out with some of her feelings. It wouldn't make much difference whether the person understood her or not; the one who should do so best wouldn't understand everything. "I want to get out of it, please—out of the set I live in, the one I have tumbled into through my sister, the people you saw just now. There are thousands of people in London who are different from that and ever so much nicer; but I don't see them, I don't know how to get at them; and after all, poor dear man, what power have you to help me?" That was, in the last analysis, the gist of what she had to say.

Mr. Wendover asked her about Selina in the tone of a person who thought Mrs. Berrington a very important phenomenon, and that, by itself, was irritating to Laura Wing. Important—gracious heaven, no! She might have to live with her, to hold her tongue about her; but at least she was not bound to exaggerate her significance. The young man didn't make use of the expression but she could see that he supposed Selina to be a professional beauty, and she guessed that as this product had not yet been domesticated in the western world the desire to behold it, after having read so much about it, had been one of the motives of Mr. Wendover's pilgrimage. Mrs. Schooling, who must have been a goose, had told him that Mrs. Berrington, though transplanted, was the finest flower of a rich, ripe society, and as clever and virtuous as she was beautiful. Meanwhile

Laura knew what Selina thought of Fanny Schooling and her incurable provinciality. "Now was that a good example of London talk—what I heard (I only heard a little of it, but the conversation was more general before you came in) in your sister's drawing-room? I don't mean literary, intellectual talk—I suppose there are special places to hear that; I mean—I mean——" Mr. Wendover went on with a deliberation which gave his companion an opportunity to interrupt him. They had arrived at Lady Davenant's door, and she cut his meaning short. A fancy had taken her, on the spot, and the fact that it was incongruous seemed only to recommend it.

"If you want to hear London talk there will be some very good going on in here," she said. "If you would like to come in with me——?"

"Oh, you are very kind—I should be delighted," replied Mr. Wendover, emulating naturally her own candor. They stepped into the porch and the young man, anticipating his companion, lifted the knocker and gave a postman's rap. She laughed at him for this and he looked bewildered; the idea of taking him in with her had become agreeably exhilarating. She explained to him who Lady Davenant was, and that if he was in search of the characteristic it would be a pity he shouldn't know her; and then she added, before he could put the question:

"And what I am doing is not in the least usual. No, it is not the custom for young ladies here to take strange gentlemen off to call on their friends the first time they see them."

"So that Lady Davenant will think it rather extraordinary?" Mr. Wendover eagerly inquired; not as if that idea frightened him, but so that his observation on this point should also be well founded. He had entered into Laura's proposal with complete serenity.

"Oh, most extraordinary!" said Laura, as they went in. The old lady, however, concealed such surprise as she may have felt, and greeted Mr. Wendover as if he were any one of fifty familiars. She took him altogether for granted, and asked him no questions about his arrival, his departure, his hotel, or his business in England. He noticed, as he afterwards confided to Laura, her omission of these forms; but he was not wounded by it—he only made a mark against it as an illustration of the difference between English and American manners: in New York people always asked the arriving stranger the first thing about the steamer and the hotel. Mr. Wendover appeared greatly impressed with Lady Davenant's antiquity, though he confessed to his companion, on a subsequent occasion, that he thought her a little flippant, a little frivolous even, for her years. "Oh, yes," said the girl, on that occasion, "I have no doubt that you considered she talked too much, for one so old. In America old ladies sit silent and listen to the young." Mr. Wendover stared a little and replied to this that with her—with Laura Wing—it was impossible to tell which side she was on, the American or the English: sometimes she seemed to take one, sometimes the other. At any rate, he added, smiling, with regard to the other great division it was easy to see—she was on the side of the old. "Of course I am," she said; "when one *is* old!" And then he inquired, according to his wont, if she were thought so in England, and she answered that it was England that had made her so.

Lady Davenant's bright drawing-room was filled with mementoes, and especially with a collection of portraits of distinguished people, mainly fine old prints with signatures, an array of precious autographs. "Oh, it's a cemetery," she said, when the young man asked her some question about one of the pictures; "they are my contemporaries, they are all dead, and those things are the tomb-stones, with the inscriptions. I'm the grave-digger, I look after the place and try to keep it a little tidy. I have dug my own little hole," she went on, to Laura, "and when you are sent for you must come and put me in." This evocation of mortality led Mr. Wendover to ask her if she had known Charles Lamb; at which she stared for an instant, replying: "Dear me, no—one didn't meet him."

"Oh, I meant to say Lord Byron," said Mr. Wendover.

"Bless me, yes; I was in love with

him. But he didn't notice me, fortunately—we were so many. He was very nice-looking, but he was very vulgar." Lady Davenant talked to Laura as if Mr. Wendover had not been there; or, rather, as if his interests and knowledge were identical with hers. Before they went away the young man asked her if she had known Garrick, and she replied: "Oh, dear, no, we didn't have them in our houses, in those days."

"He must have been dead long before you were born!" Laura exclaimed.

"I dare say; but one used to hear of him."

"I think I meant Edmund Kean," said Mr. Wendover.

"You make little mistakes of a century or two," Laura Wing remarked, laughing. She felt now as if she had known Mr. Wendover a long time.

"Oh, he was very clever," said Lady Davenant.

"Very magnetic, I suppose," Mr. Wendover went on.

"What's that? I believe he used to get tipsy."

"Perhaps you don't use that expression in England?" Laura's companion inquired.

"Oh, I dare say we do, if it's American; we talk American now. You seem very good-natured people, but such a jargon as you *do* speak!"

"I like *your* way, Lady Davenant," said Mr. Wendover, benevolently, smiling.

"You might do worse," cried the old woman, and then she added: "Please go out!" They were taking leave of her, but she kept Laura's hand and, for the young man, nodded, with decision, at the open door. "Now, wouldn't *he* do?" she asked, after Mr. Wendover had passed into the hall.

"Do for what?"

"For a husband, of course."

"For a husband—for whom?"

"Why—for me," said Lady Davenant.

"I don't know—I think he might tire you."

"Oh—if he's tiresome!" the old lady continued, smiling at the girl.

"I think he's very good," said Laura.

"Well, then, he'll do."

"Ah, perhaps *you* won't!" Laura exclaimed, smiling back at her and turning away.

VIII.

She was of a serious turn by nature, and, unlike many serious people, she made no particular study of the art of being gay. Had her circumstances been different she might have done so, but she lived in a merry house (heaven save the mark! as she used to say), and therefore was not driven to amuse herself for conscience sake. The diversions she sought were of a serious cast, and she liked those best which showed most the note of difference from Selina's interests and Lionel's. She felt that she was most divergent when she attempted to cultivate her mind, and it was a branch of such cultivation to visit the curiosities, the antiquities, the monuments of London. She was fond of the Abbey and the British Museum—she had extended her researches as far as the Tower. She read the works of Mr. John Timbs and made notes of the old corners of history that had not yet been abolished—the houses in which great men had lived and died. She planned a general tour of inspection of the ancient churches of the City and a pilgrimage to the queer places commemorated by Dickens. It must be added that though her intentions were great her adventures had as yet been small. She had wanted for opportunity and independence; people had other things to do than to go with her, and it was not till she had been some time in the country, and till a good while after she had begun to go out alone, that she entered upon the privilege of visiting public institutions by herself. There were some aspects of London that frightened her, but there were certain spots, such as the Poet's Corner in the Abbey, or the room of the Elgin marbles, where she liked better to be alone than not to have the right companion. At the time Mr. Wendover presented himself in Grosvenor Place she had begun to put in, as they said, a museum, or something of that sort, whenever she had a chance. Besides her idea that such places were sources of knowledge (it is to be feared that the poor girl's notions of knowledge were at once conventional and crude) they were also occasions for detachment, an escape

from worrying thoughts. She forgot Selina and she "qualified" herself a little—though for what she hardly knew.

The day Mr. Wendover dined in Grosvenor Place they talked about St. Paul's, which he expressed a desire to see, wishing to get some ideas of the past, as he said, in England, as well as of the present. Laura mentioned that she had spent half an hour, the summer before, in the big black temple on Ludgate Hill; whereupon he asked her if he might entertain the hope that—if it were not disagreeable to her to go again—she would serve as his guide there. She had taken him to see Lady Davenant, who was so remarkable and worth a long journey, and now he should like to pay her back—to show her something. The difficulty would be that there was probably nothing she hadn't seen, but if she could think of anything he was completely at her service. They sat together at dinner, and she told him she would think of something before the repast was over. A little while later she let him know that a charming place had occurred to her—a place to which she was afraid to go alone and where she should be grateful for a protector; she would tell him more about it afterwards. It was then settled between them that on a certain afternoon of the same week they would go to St. Paul's together, extending their ramble as much further as they had time. Laura lowered her voice for this discussion, as if the range of allusion had had a kind of impropriety. She was now still more of the mind that Mr. Wendover was a good young man—he had such worthy eyes. His principal defect was that he treated all subjects as if they were equally important; but that was perhaps better than treating them with equal levity. If one took an interest in him one might not despair of teaching him to discriminate.

Laura said nothing, at first, to her sister about her appointment with him; the feelings with which she regarded Selina were not such as to make it easy for her to talk over matters of conduct, as it were, with this votary of pleasure at any price, or at any rate to report her arrangements to her as one would do to a person of fine judgment. All the same, as she had a horror of positively hiding anything (Selina herself did that enough for two) it was her purpose to mention at luncheon, on the day of the event, that she had agreed to accompany Mr. Wendover to St. Paul's. It so happened, however, that Mrs. Berrington was not at home at this repast; Laura partook of it in the company of Miss Steet and her young charges. It very often happened now that the sisters didn't meet in the morning, for Selina remained very late in her room, and there had been a considerable intermission of the girl's earlier custom of visiting her there. It was Selina's habit to send forth from this fragrant sanctuary little hieroglyphic notes, in which she expressed her wishes or gave her directions for the day. On the morning I speak of her maid put into Laura's hand one of these communications, which contained the words, "Please be sure and replace me with the children at lunch. I meant to give them that hour to-day. But I have a frantic appeal from Lady Watermouth; she is worse, and beseeches me to come to her, so I rush for the 12.30 train." These lines required no answer, and Laura had no questions to ask about Lady Watermouth. She knew she was tiresomely ill, in exile, condemned to forego the diversions of the season and calling out to her friends, in a house she had taken for three months at Weybridge (for a certain particular air) where Selina had already been to see her. Selina's devotion to her appeared commendable—she had her so much on her mind. Laura had observed in her sister, in relation to other persons and objects, these sudden intensities of charity, and she had said to herself, watching them—"Is it because she is bad?—does she want to make up for it somehow and to buy herself off from the penalties?"

Mr. Wendover called for his *cicerone* and they agreed to go in a romantic, Bohemian manner (the young man was very docile and appreciative about this) walking the short distance to the Victoria Station and taking the mysterious underground railway. In the carriage she anticipated the inquiry that she figured to herself he would presently

make, and said, laughing: "No, no, this is very exceptional; if we were both English—and both what we are, otherwise—we wouldn't do this."

"And if only one of us were English?"

"It would depend upon which one."

"Well, say me."

"Oh, in that case I certainly—on so short an acquaintance—wouldn't go sight-seeing with you."

"Well, I am glad I'm American," said Mr. Wendover, sitting opposite to her.

"Yes, you may thank your fate. It's much simpler," Laura added.

"Oh, you spoil it!" the young man exclaimed—a speech of which she took no notice but which made her think him brighter, as they used to say at home. He was brighter still after they had descended from the train at the Temple station (they had meant to go on to Blackfriars, but they jumped out on seeing the sign of the Temple, fired with the thought of visiting that institution too) and got admission to the old garden of the Benchers, which lies beside the foggy, crowded river, and looked at the tombs of the crusaders in the low Romanesque church, with the cross-legged figures sleeping so close to the eternal uproar, and lingered in the flagged, homely courts of brick, with their much-lettered door-posts, their dull old windows and atmosphere of consultation—lingered to talk of Johnson and Goldsmith and to remark how London opened one's eyes to Dickens; and he was brightest of all when they stood in the high, bare cathedral, which suggested a dirty whiteness, saying it was fine, but wondering why it wasn't finer, and letting a glance as cold as the dusty, colorless glass fall upon epitaphs that seemed to make most of the defunct bores even in death. Mr. Wendover was decorous, but he was increasingly gay, and these qualities appeared in him in spite of the fact that St. Paul's was rather a disappointment. Then they felt the advantage of having the other place—the one Laura had had in mind at dinner—to fall back upon: that perhaps would prove a compensation. They entered a hansom now (they had to come to that, though they had walked also from the Temple to St. Paul's) and drove to Lincoln's Inn Fields, Laura making the reflection, as they went, that it was really a charm to roam about London under valid protection—such a mixture of freedom and safety—and that perhaps she had been unjust, ungenerous, to her sister. A good-natured, positively charitable doubt came into her mind—a doubt that Selina might have the benefit of. What she liked in her present undertaking was that it was unconventional, and perhaps it was simply the same happy sense of getting the laws of London—once in a way—off her back, that had led Selina to go over to Paris to ramble about with Captain Crispin. Possibly they had done nothing worse than go together to the Invalides and Notre Dame; and if any one were to meet *her* driving that way, so far from home, with Mr. Wendover—Laura, mentally, didn't finish her sentence, overtaken as she was by the reflection that she had fallen again into her old assumption (she had been in and out of it a hundred times), that Mrs. Berrington *had* met Captain Crispin—the idea she so passionately repudiated. She at least would never deny that she had spent the afternoon with Mr. Wendover; she would simply say that he was an American and had brought a letter of introduction.

The cab stopped at the Soane Museum, which Laura Wing had always wanted to see, a compatriot having once told her that it was one of the most curious things in London, and one of the least known. While Mr. Wendover was discharging the vehicle she looked over the wide handsome square (which led her to say to herself that London was endlessly big and one would never know all the places that made it up) and saw a great bank of cloud hanging above it—a definite portent of a summer storm. "We are going to have thunder; you had better keep the cab," she said; upon which her companion told the man to wait, so that they shouldn't afterwards, in the wet, have to walk for another conveyance. The heterogeneous objects collected by the late Sir John Soane are arranged in a fine old dwelling-house, and the place gives one the impression of a sort of Saturday afternoon of one's youth—a long, rummaging visit, under indulgent

care, to some eccentric and rather alarming old travelled person. Our young friends wandered from room to room and thought everything queer and some few objects interesting; Mr. Wendover said it would be a very good place to find a thing you couldn't find anywhere else—it illustrated the prudent virtue of keeping. They took note of the sarcophagi and pagodas, the curious old maps and medals. They admired the fine Hogarths; there were uncanny, unexpected objects that Laura edged away from, that she didn't like to be in the room with. They had been there half an hour—it had grown much darker—when they heard a tremendous peal of thunder and became aware that the storm had broken. They watched it awhile from the upper windows—a violent June shower, with quick sheets of lightning and a rainfall that danced on the pavements. They took it sociably, they lingered at the window, inhaling the odor of the fresh wet that splashed over the sultry town. They would have to wait till it had passed, and they resigned themselves serenely to this idea, repeating very often that it would pass very soon. One of the keepers told them that there were other rooms to see—that there were very interesting things in the basement. They made their way down—it grew much darker and they heard a great deal of thunder—and entered a part of the house which presented itself to Laura as a series of dim, irregular vaults—passages and little narrow avenues—encumbered with strange vague things, obscured for the time, but some of which had a wicked, startling look, so that she wondered how the keepers could stay there. "It's very fearful—it looks like a cave of idols!" she said to her companion, and then she added—"Just look there—is that a person or a thing?" As she spoke they drew nearer to the object of her reference—a figure in the middle of a small vista of curiosities, a figure which answered her question by uttering a short shriek as they approached. The immediate cause of this cry was apparently a vivid flash of lightning, which penetrated into the room and illuminated both Laura's face and that of the mysterious person. Our young lady recognized her sister, as Mrs. Berrington had evidently recognized her. "Why, Selina!" broke from her lips before she had time to check the words. At the same moment the figure turned quickly away, and then Laura saw that it was accompanied by another, that of a tall gentleman with a light beard, which shone in the dusk. The two persons retreated together—dodged out of sight, as it were, disappearing in the gloom, or in the labyrinth of the objects exhibited. The whole encounter was but the business of an instant.

"Was it Mrs. Berrington?" Mr. Wendover asked, with interest, while Laura stood staring.

"Oh, no, I only thought it was at first," she managed to reply, very quickly. She had recognized the gentleman—he had the fine fair beard of Captain Crispin—and her heart seemed to her to jump up and down. She was glad her companion couldn't see her face, and yet she wanted to get out, to rush up the stairs where he would see it again, and escape from the place. She didn't wish to be there with *them*—she was overwhelmed with a sudden horror. "She has lied—she has lied again—she has lied!"—that was the rhythm to which her thought began to dance. She took a few steps one way and then another; she was afraid of running against the dreadful pair again. She remarked to her companion that it was time they should go off, and then, when he showed her the way back to the staircase, she said she hadn't half seen the things. She pretended suddenly to a deep interest in them, and lingered there, roaming and prying about. She was flurried still more by the thought that he would have seen her flurry, and she wondered whether he believed the woman who had shrieked and rushed away was *not* Selina. If she wasn't Selina why had she shrieked? and if she was Selina what would Mr. Wendover think of her behavior, and of her own, and of the strange accident of their meeting? What must she herself think of that? so astonishing it was that in the immensity of London so infinitesimally small a chance should have got itself enacted. What a queer place to come to—for people like them! They would get away as soon as possible, of that she

could be sure ; and she would wait a little to give them time.

Mr. Wendover made no further remark—that was a relief ; though his silence itself seemed to show that he was puzzled. They went up-stairs again, and on reaching the door found, to their surprise, that their cab had disappeared —a circumstance the more singular as the man had not been paid. The rain was still coming down, though with less violence, and the square had been cleared of vehicles by the sudden storm. The doorkeeper, perceiving the dismay of our friends, explained that the cab had been taken up by another lady and gentleman, who had gone out a few minutes before ; and when they inquired how he had been induced to depart without the money they owed him, the reply was that there evidently had been a discussion (he hadn't heard it, but the lady seemed in a fearful hurry) and the gentleman had told him that they would make it all up to him and give him a lot more into the bargain. The doorkeeper hazarded the candid surmise that the cabby would make ten shillings by the job. But there were plenty more cabs ; there would be one up in a minute, and the rain moreover was going to stop. "Well, that *is* sharp practice!" said Mr. Wendover. But he made no further allusion to the identity of the lady.

IX.

The rain did stop while they stood there, and a brace of hansoms was not slow to appear. Laura told her companion that he must put her into one—she could go home alone ; she had taken up enough of his time. He deprecated this course, very respectfully ; urged that he had it on his conscience to deliver her at her own door ; but she sprang into the cab and closed the apron with a movement that was a sharp prohibition. She wanted to get away from him—it would be too awkward, the long, pottering drive back. Her hansom started off, while Mr. Wendover, smiling sadly, lifted his hat. It wasn't very comfortable, even without him ; especially as before she had gone a quarter of a mile she felt that it had been too marked—she wished she had let him come. His puzzled, innocent air of wondering what was the matter, annoyed her ; and she was in the absurd situation of being angry at a discretion which she would have been still more angry if he had departed from. It would have comforted her (because it would seem to share her burden) and yet it would have covered her with shame if he had guessed that what she saw was wrong. It wouldn't occur to him that there was a scandal so near her, because he didn't easily think such things ; and yet, since there was—but since there was, after all, Laura scarcely knew what attitude would sit upon him most gracefully. As to what he might be prepared to suspect by having heard what Selina's reputation was in London, of that Laura couldn't judge, not knowing what was said, because, of course, it wasn't said to *her*. Lionel would undertake to give her the benefit of this any moment she would allow him, but how in the world could *he* know either, for how could things be said to him? Then, in the rattle of the hansom, passing through streets the girl didn't see, "She has lied, she has lied, she has lied!" kept repeating itself. Why had she written and signed that wanton falsehood about her going down to Lady Watermouth? How could she have gone to Lady Watermouth when she was making so very different and so extraordinary a use of the hours she had announced her intention of spending there? What had been the need of that misrepresentation, and why did she lie before she was driven to it?

It was because she was false altogether, and deception came out of her with her breath ; she was so depraved that it was easier to her to fabricate than to let it alone. Laura wouldn't have asked her to give an account of her day, but she would ask her now. She shuddered at one moment, as she found herself saying —even in silence—such things of her sister, and the next she sat staring out of the front of the cab at the queer problem presented by Selina's turning up with the partner of her guilt, at the Soane Museum, of all places in the world. The girl turned this fact about in various ways, to account for it—not unconscious, as she did so, that it was a pretty exer-

cise of ingenuity for a nice girl. Plainly, it was a rare accident; if it had been their plan to spend the day together the Soane Museum had not been in the original programme. They had been near it, they had been on foot, and they had rushed in to take refuge from the rain. But how did they come to be near it, and, above all, to be on foot? How could Selina do anything so reckless, from her own point of view, as to walk about the town—even an out-of-the-way part of it—with her suspected lover? Laura Wing felt the want of proper knowledge to explain such anomalies. It was too little clear to her where ladies went, and how they proceeded, when they consorted with gentlemen in regard to their meetings with whom they had to lie. She didn't know where Captain Crispin lived; very possibly—for she vaguely remembered having heard Selina say of him that he was very poor—he had chambers in that part of the town, and they were either going to them or coming from them. If Selina had neglected to take her way in a four-wheeler, with the glasses up, it was through some chance that wouldn't seem natural till it was explained, like that of their having darted into a public institution. The explanation most exact would probably be that the pair had snatched a walk together (in the course of a day of many edifying episodes) for the "lark" of it, and for the sake of the walk had taken the risk, which in that part of London, so detached from all gentility, had appeared to them small. The last thing Selina could have expected was to meet her sister in such a strange corner—her sister with a young man of her own!

She was dining out that night with both Selina and Lionel—a conjunction that was rather rare. She was by no means always invited with them, and Selina often went without her husband. Appearances, however, sometimes got a sop thrown them; three or four times a month Lionel and she entered the brougham together, like people who still had forms, who still said "my dear." This was to be one of those occasions, and Mrs. Berrington's young unmarried sister was included in the invitation. When Laura reached home she learned, on inquiry, that Selina had not come in, and she went straight to her own room. If her sister had been there she would have gone to hers instead—she would have cried out to her as soon as she had closed the door: "Oh, stop, stop—in God's name, stop, before you go any further, before exposure and ruin and shame come down and bury us!" That was what was in the air—the vulgarest disgrace, and the girl, harder now than ever about her sister, was conscious of a more passionate desire to save herself. But Selina's absence made the difference that during the next hour a certain chill fell upon this impulse from other feelings; she found, suddenly, that she was late, and she began to dress. They were to go together, after dinner, to a couple of balls, and this diversion struck her as ghastly for people who carried such horrors in their breasts—ghastly the idea of the drive of husband, wife, and sister, in pursuit of pleasure, with falsity and detection and hate between them. Selina's maid came to her door to tell her that she was in the carriage—an extraordinary piece of punctuality, which made her wonder, as Selina was always dreadfully late for everything. Laura went down as quickly as she could, passed through the open door, where the servants were grouped in the foolish majesty of their superfluous attendance, and through the file of dingy gazers who had paused at the sight of the carpet across the pavement and the waiting carriage, in which Selina sat in pure white splendor. Mrs. Berrington had a tiara on her head and a proud patience in her face, as if her sister were really a sore trial. When the girl had taken her place, she said to the footman: "Is Mr. Berrington there?"—to which the man replied: "No, ma'am, not yet." It was not new to Laura that if there was anyone later, as a general thing, than Selina, it was Selina's husband. "Then he must take a hansom. Go on." The footman mounted, and they rolled away.

There were several different things that had been present to Laura's mind, during the last couple of hours, as destined to mark—one or the other—this present encounter with her sister; but the words Selina spoke the moment the brougham began to move were of course exactly

those that she had not foreseen. She had considered that she might take this tone or that tone or even no tone at all; she was quite prepared for her presenting a face of blankness (to any form of interrogation) and saying, "What on earth are you talking about?" It was, in short, conceivable to her that Selina would deny, absolutely, that she had been in the museum, that they had stood face to face, and that she had fled in confusion. She was capable of explaining the incident by an idiotic error on Laura's part, by her having mistaken another person for her sister, by her seeing Captain Crispin in every bush; though doubtless she would be taxed (of course she would say *that* was the woman's own affair) to supply a reason for the embarrassment of the other lady. But she was not prepared for Selina's breaking out with: "Will you be so good as to inform me if you are engaged to be married to Mr. Wendover?"

"Engaged to him? I have seen him but three times."

"And is that what you usually do with gentlemen you have seen three times?"

"Are you talking about my having gone with him to see some sights? I see nothing wrong in that. To begin with, you see what he is. One might go with him anywhere. Then he brought us an introduction—we have to do something for him. Moreover, you threw him upon me the moment he came—you asked me to take charge of him."

"I didn't ask you to be indecent! If Lionel were to know it he wouldn't tolerate it, so long as you live with us."

Laura was silent a moment. "I shan't live with you long." The sisters, side by side, with their heads turned, looked at each other, and a deep crimson had leaped into Laura's face. "I wouldn't have believed it—that you are so bad," she said. "You are horrible!" She saw that Selina had not taken up the idea of denying—she judged that would be hopeless: the recognition, on either side, had been too sharp. She looked radiantly handsome, especially with the strange new expression that Laura's last word brought into her eyes. This expression seemed to the girl to show her more of Selina, morally, than she had ever yet seen—something of the full extent and the miserable limit.

"It's different for a married woman, especially when she's married to a beast. It's in a girl that such things are odious—scouring London with strange men. I am not bound to explain to you—there would be too many things to say. I have my reasons—I have my conscience. It was the oddest of all things, our meeting in that place—I know that as well as you," Selina went on, with her wonderful affected clearness; "but it was not your finding me that was out of the way; it was my finding you—with your remarkable escort! That was incredible. I pretended not to recognize you, so that the gentleman who was with me shouldn't see you, shouldn't know you. You may thank me for saving you. You had better wear a veil next time—one never knows what may happen. I met an acquaintance at Lady Watermouth's, and he came up to town with me. He happened to talk about old prints; I told him how I have collected them, and we spoke of the bother one has about the frames. He insisted on my going with him to that place—from Waterloo—to see such an excellent model."

Laura had turned her face to the window of the carriage again; they were spinning along Park Lane, passing, in the quick flash of other vehicles, an endless succession of ladies with "dressed" heads, of gentlemen in white neckties. "Why, I thought your frames were all so pretty!" Laura murmured. Then she added: "I suppose it was your eagerness to save your companion the shock of seeing me—in my dishonor—that led you to steal our cab."

"Your cab?"

"Your delicacy was expensive for you!"

"You don't mean you were knocking about in *cabs* with him!" Selina cried.

"Of course I know that you don't really think a word of what you say—about me," Laura went on, "though I don't know that that makes your saying it a bit less unspeakably base."

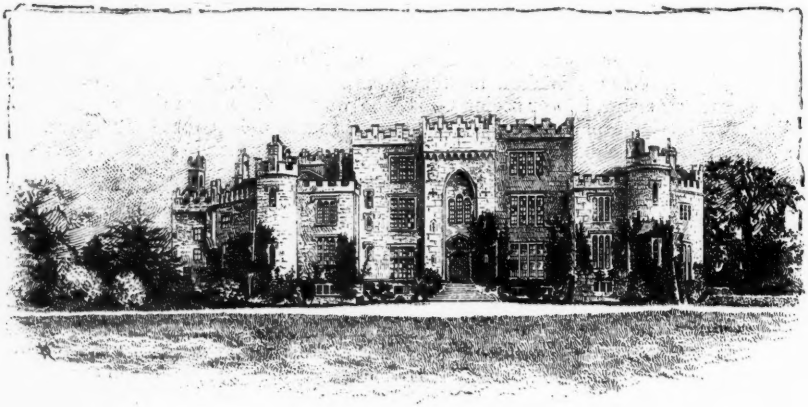
The brougham pulled up in Park Lane, and Mrs. Berrington bent herself to have a view through the front glass. "We are there, but there are two other

carriages," she remarked, for all answer. "Ah, there are the Collingwoods."

"Where are you going—where are you going—where are you going?" Laura broke out.

The carriages moved on, to set them down, and while the footman was getting off the box Selina said: "I don't pretend to be better than other women, but you do!" And being on the side of the house, she quickly stepped out and carried her crowned brilliancy through the long-lingering daylight and into the open portals.

[To be continued.]



A Near View of Birr Castle.

AN ASTRONOMER'S SUMMER TRIP.

By Charles A. Young.

"What shadows we are, and what shadows we pursue."

IN the early morning of the 19th of last August there was a total eclipse of the sun. The moon's shadow, about 80 miles in diameter, first struck the earth near Berlin, at sunrise. From there it moved on into the Russian empire, passing just north of Moscow, and, bearing still a little to the north, crossed the Ural Mountains into Siberia; it passed over the towns of Krasnojarsk and Tobolsk, crossed Lake Baikal about noon, and now bending its course a little southward, advanced across Northern China, visited Japan in the afternoon, and finally ended its course in the Pacific Ocean about 2,000 miles west of the Sandwich Islands.

Like all total eclipses of the sun, it was anticipated by astronomers with lively interest. The few rarely occurring moments when the sun's dazzling disk is hidden by the moon, and in our darkened air the glory of the corona and the mysteries of the solar atmosphere thus become visible and accessible to study—these moments constitute the astronomer's golden opportunity, to be utilized to the utmost. The writer of this paper had a somewhat special, and semi-private, interest in the matter, because lately a question has been raised by Mr. Lockyer and others as to the real existence of the so-called "reversing layer" of the sun's atmosphere, which layer owes its scientific recognition mainly to an observation made by myself during the Spanish eclipse of December, 1870. The obser-

vation referred to was this—and an exquisitely beautiful thing it was to see:

The slit of the spectroscope, attached to a powerful telescope, was adjusted tangent to the sun's image at the precise point where the last ray would vanish under the advancing moon. A few moments before totality the spectrum still preserved in the main its familiar appearance, except that certain lines, usually only flickeringly and faintly bright at the sun's limb, were now steady and conspicuous; this was specially true of the three magnesium lines, and the mysterious line of the corona. The other countless dark lines remained hard and black. But the moment the sunlight vanished, the dark lines instantly flashed into colored brightness, shone for two or three seconds, and then quickly faded away, leaving still visible only those which had been bright before totality. Of course, in the two or three seconds during which the phenomenon lasted it was not possible to be quite sure that *all* the dark lines were thus reversed, and in this uncertainty lies the opportunity for varying interpretations of the phenomenon. The natural interpretation, in the light of what was then known, was that this bright line spectrum which flashed out so beautifully is due to a thin sheet of gaseous matter, overlying the luminous clouds which constitute the so-called "photosphere," and containing, in the vaporous form, all the substances which reveal themselves to us by the dark lines of the ordinary spectrum.

Hence the writer's special interest in the Russian eclipse; and when the case was laid before certain liberal friends of everything that is good, they at once responded with the offer of funds sufficient to send out three of us with the necessary apparatus. Photography at first was not included in our plans; but when my colleague, Professor Libbey, volunteered to join us at his own charges, his offer was enthusiastically accepted, and through the kindness of the Washington astronomers and the Secretary of the Navy we secured the use of an eclipse camera which had been employed by one of the Government parties in photographing the Colorado eclipse of 1878. Professor Libbey was accompanied by his wife, who had with her also two young friends, so that when we sailed from New York on the 25th of June, in the swift Etruria, we were a party of seven, Professor McNeill, and Mr. Fisher, our mechanician, being the two others of the original three.

Probably most of our readers know that our journey ended in disappointment and a rain-storm. We were at our post and in readiness on the designated morning, and no one of course was to blame for the envious clouds which defeated the army of astronomers who had taken position along the line of operations. But the disappointment was keen, and it is still rather a sober task to retrace in memory the way that led to and from it.

The journey, however, was in itself a most agreeable one, and full of interest, especially from an astronomer's point of view, for we took pains as far as possible to visit all the observatories, and all the distinguished astronomers that came in our way.

The voyage was quick and uneventful—we reached the Liverpool bar about 10 A.M., just seven days after we passed Sandy Hook, and arrived in London soon after midnight. It is much the same as I saw it in 1870, only ever more and more extensive; broadening, widening, overflowing all the country about it like stiffening lava. The Jubilee celebrations had just come to an end, and many of the persons we would have been glad to see were out of town, but many remained.

One delightful afternoon was spent with Dr. Huggins, the pioneer in astronomical spectroscopy. He is a veteran eclipse observer, and was naturally much interested in our plans: we owe to him many valuable suggestions.

We had also several interviews with Mr. Lockyer, and spent an "evening in council" with him, discussing, in the most cordial and friendly way, the points at issue in regard to the "reversing layer," and considering the best arrangements for making our observations decisive. He is a younger man than Dr. Huggins, but as an eclipse observer still more of a veteran, having already been on duty on five such occasions. He

would have been glad to go to Russia himself, but his engagements would not permit.

But, after all, our red-letter day in London was not in London itself, but at Greenwich, whither we went one morning in response to a kind invitation from Mr. Christie, the Astronomer Royal. Everyone knows that the Royal Observatory of England is one of the oldest governmental institutions of the kind, and on the whole the most distinguished and important of them all, taking into account both the past and the present. It keeps up faithfully, according to its charter-duties, its special observations upon the sun, moon, and planets—observations which lie at the foundation of navigational astronomy—but it is reaching out in other directions also, especially in the line of astronomical physics.

The present Astronomer Royal, Mr. Christie, and his chief lieutenants, Mr. Turner and Mr. Maunder, are comparatively young men. I imagine that they keep the force of observers and computers, some twenty or thirty in number, pretty faithfully to their work, and that not infrequently the smooth running of the machine along ancient ruts is disturbed by the introduction of new methods.

At present they are specially interested in photography, both stellar and solar. We saw a number of admirable negatives of the sun, 9 inches in diameter, and some enlargements of sun-spots and the surrounding regions which rival, and perhaps quite equal, those we saw a few days later at Meudon. Experiments are also in progress upon the photography of double-stars, and one or two of the plates we saw are admirable.

To a certain extent the Observatory is in a transition state. The instruments which were introduced and used for the observation of the places of stars and planets under Airy's administration remain undisturbed. It is perhaps possible that with instruments of newer design and construction there might be some slight gain in accuracy; but it is doubtful whether it would be sufficient to offset the loss of continuity involved in a change.

The telescopic power at the disposal of the observers has, however, become very inadequate, and the old 13-inch telescope of the equatorial is to be replaced by a new one of 28 inches aperture, now under construction by Grubb, of Dublin. The two-foot reflector of Lassell, with which he did such admirable work years ago, has recently been given to the Observatory by his daughters, and is proving itself a most useful instrument in numerous researches where a reflector is needed.

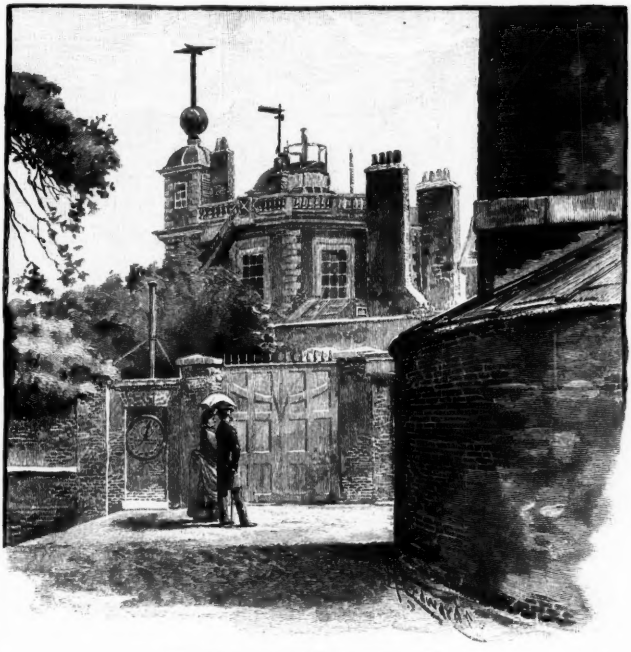
The Observatory has great advantages of situation. The main building itself is the work of Sir Christopher Wren, erected in 1675: a dignified edifice, surrounded by a numerous progeny of smaller constructions for the accommodation of various instruments which could not find convenient quarters in the original building. It stands isolated in the midst of Greenwich Park, on a hill about 150 feet high. From the great octagonal hall which makes the most charming of summer sitting-rooms, one looks out over the tree-tops upon a magnificent landscape. To the northwest is London, with the great dome of St. Paul's some six miles distant, rising high above the pall of smoke that overhangs the city; to the north, across the park and beyond the old Greenwich Hospital, now a naval training-school, lies the broad Thames, crowded with shipping of every imaginable size and rig, from wherry and fishing-boat to the great ocean steamers and men-of-war. Beyond the river are the low hills of Essex, and farther to the east the river widens toward the sea.

In London our party separated for a time, agreeing to rendezvous in Berlin on the first of August. Professor McNeill and I took our course together through Paris, Strassburg, Munich, Vienna, and Prague. We were in Paris only a week, and one of our days was the 14th of July, which gave us a fine opportunity to see a good-humored Parisian crowd numbering certainly 200,000 people, who in the early evening thronged all the streets and quais, and the great squares where the fireworks were displayed.

We visited the National Observatory one afternoon, and were very cordially received by the director, Admiral Mouchez, who although a sailor is also an

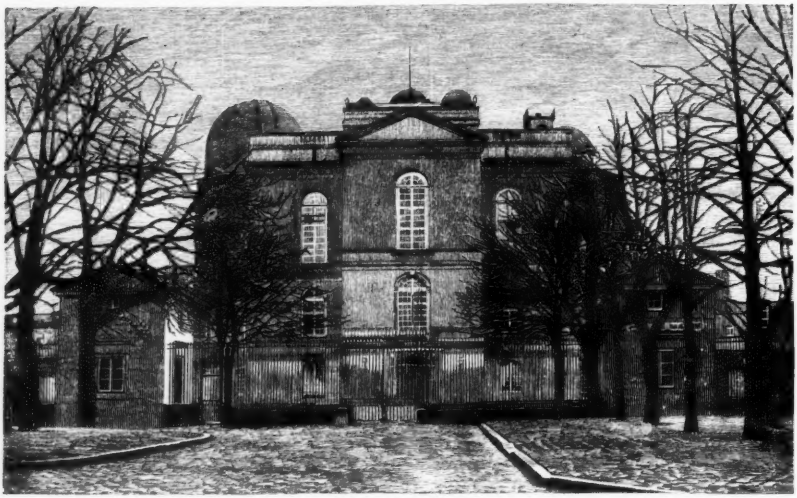
astronomer of high repute, especially in the line of longitude determinations.

The institution is a few years older than the Observatory of Greenwich, having been established in 1667, though the building was not completed until 1671. It is a larger and finer edifice than that of Greenwich, but curiously unsuited for its use. It has been adapted to astronomical purposes only by most ingenious modifications and roof structures, and many of the most important modern instruments are housed in separate constructions about the grounds; as for instance the great 4-foot reflector (useless), the equatorial coudé, and the photographic telescope of the Henry Brothers. In the evening we saw the photographic telescope and the equatorial coudé in actual operation, which were to us on the whole the most interesting objects. The equatorial coudé, or *elbowed equatorial*, is a telescope of 10 inches aperture, which is so fitted with two flat mirrors that the observer does not have to move out of his place in observing a star in any part of the sky; he sits quietly under cover, looking downward toward the south at an angle equal to that of the latitude of the place, having right before him the circles and all the mechanism of the instrument. The arrangement makes telescopic observation as facile and as comfortable as microscopic. The instrument is, of course, considerably complicated, and much more expensive than the ordinary equatorial; but the costly revolving dome is dispensed with, so that the saving in the building quite offsets the higher price of the instrument itself. The real objection to it is that the two reflections cause a loss of light, and also, unless the mirrors are perfectly flat, an injury to the definition. Some who have examined the instrument say that in this Paris instrument the figure is perfect, but we found it not quite the case. In looking at ε Lyræ with a high power, we detected a very perceptible distortion of the star images; so slight, however, as to be of no practical account in ordinary observation. Two or three instruments of this kind are now installed and at work in different French observatories, and a number of others are under construction. Loewy, its inventor, is very sanguine that the same construction can be applied advantageously to instruments of the largest size.



Royal Observatory of England, Greenwich.

The photographic telescope and processes interested us greatly, and so did the Henry Brothers themselves, who,



French National Observatory, Paris.

like Erckmann & Chatrian, work together and publish their results as a single person. Their telescope has an object-glass 13 inches in diameter, expressly constructed for photography, and the same tube carries also an ordinary telescope of 9 inches diameter, which serves as a tender to the other, and enables the operator to keep it accurately pointed during the exposure of the plates. The whole is mounted substantially after the so-called English pattern of equatorial, like the telescope at Greenwich.

At the Astronomical Congress which had been held at Paris in April and May, it was decided to undertake the construction of a photographic chart of the whole heavens by the co-operation of about a dozen different observatories, the apparatus used to be the same everywhere, as well as the plates and processes of development. The Paris instrument was selected as the standard, and many of the other instruments are already well advanced in their construction. It would take us too far to enter into the details of the matter now—but clearly this photographic mapping of all the stars will be, when accomplished, the greatest astronomical achievement the world has ever seen; transmitting to posterity an accurate and permanent record of the present state of the heavens, and furnishing a secure foundation for the future structure of stellar astronomy.

Another day we went to Meudon with Lieutenant Winterhalter, to visit "the Observatory of Physical Astronomy." This is also a Government institution, established in 1876 for the *new* astronomy, as Professor Langley calls it, its main work being spectroscopic research and the study of the physical features of the sun and planets. Its director is M. J. Janssen, who at the solar eclipse of 1868, in India, discovered how to observe the solar prominences by means of the spectroscope. The same discovery was made, as everyone knows, independently and simultaneously by Lockyer, in England. M. Janssen has been on a number of astronomical expeditions—was in Northern Africa to observe the eclipse of 1870, in India again in 1871, and in Japan in 1874, to observe the transit of Venus. In 1870 he made his way out of Paris over the German lines *in a balloon*, but at his station had unfortunately the same bad fortune as Dr. Huggins, who was near him. He is at present the president of the French Academy of Sciences: an elderly man of middle size, with a ruddy countenance and a bright eye, but not in very vigorous health.

We were shown about the establishment by M. Stanoićwitch, professor of physics in the University of Belgrade, who had been for some time studying celestial physics at the Observatory. He was just closing his work there, and took the Russian eclipse on his way home, being one of the very few fortunates who had good weather. He was at Jaroslav, some 150 miles farther east than we.

The site of the Meudon Observatory is magnificent. It is on a hill a few miles west of Paris, which overlooks the city and the country beyond, and commands a panorama even finer than that from the Greenwich tower. During the war the ancient château and most of the buildings on the old royal estate of Meudon were burned; but the stables remain, and in them Janssen has erected the extensive apparatus with which he has been making his remarkable spectroscopic researches upon the absorption of light by gases and vapors —the light being made to travel several hundred feet through large iron pipes filled with the gas at a pressure of two or three hundred pounds to the inch. The place looks more like a great blacksmith-shop than it does like our ordinary ideas of a scientific laboratory. There is a maximum of efficiency, but very little *prettiness*.

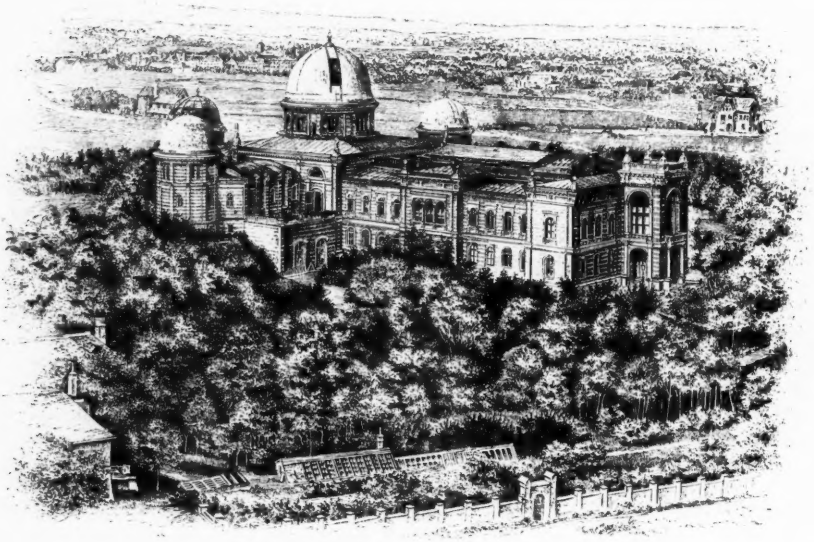
The same thing is true of the buildings which shelter the photographic telescopes and apparatus. They are for the most part temporary structures; and some of the telescopes which are most used are not under cover at all, but are mounted on rough stands in the open air. But the photographic work is admirable. We saw some pictures of sun-spots which had been enlarged ten or twelve times from the original negative, so that the spot itself was an inch or two in diameter, and yet showing all the minor details of sun-spot structure clearly and sharply. A large, fine building for the permanent observatory is nearly finished, and is to contain an enormous equatorial carrying two telescopes on the same stand. One of the two telescopes is to be 30 inches in diameter, with the object-glass corrected for *visual* use; the other is to have a photographic object-glass of two feet in diameter.

Janssen, through his personal friendship with Gambetta, was very fortunate in securing liberal government support for his establishment. Admiral Mouchez, at the old Observatory in Paris, seems to have had more difficulty. At any rate, he has so far been quite unable to secure the carrying out of his favorite plan, to remove the old Observatory from its present unfavorable site in the heart of the city, and re-establish it in a better one outside.

From Paris we went to Strassburg and visited the magnificent new observatory which the German Government has established there. Dr. Kobold, the acting-director, showed us through the establishment. A curious and excellent peculiarity of construction is that the central building, which contains the director's residence, library, and computing-rooms, is connected by long underground passages with the two structures which contain the great equatorial and the other instruments. The equatorial has an object-glass nearly 20 inches in diameter, by Merz, of Munich, the largest he has yet made. Its mounting is by Repsold, of Hamburg, and is essentially the same as that of the 15-inch instrument at Pulkowa. The mounting is very elaborate and a little complicated; it certainly is much handsomer and more finely finished than the instruments constructed by the Clarks in this country, and in some respects, especially as regards the illumination of the micrometer and its operation, is unquestionably better; but I very much doubt whether one could work with such an instrument any more accurately, or much more rapidly, than with one of Clark's.

From Strassburg we went to Munich, a city dear to art and science of every kind. To the astronomer its greatest claim to interest lies in the fact that it was the home of Fraunhofer, and for many years, say from 1820 till 1860, the only place where "great and good" telescopes were made. The observatory here, under the Lamonts, father and son, was also for many years one of the most important in Europe. As regards instruments and equipment it has, however, practically stood still for the last thirty

years, and so no longer holds anything like its former rank. We regretted the less, therefore, that when we visited it we failed to find the director, Dr. Seeliger. We visited the optical establishments of Merz, successor to Fraunhofer's successor, and of Steinheil, son of the Steinheil who in 1838 erected and operated, between the observatory and his establishment in the city, the first practically working electric telegraph.



Vienna Observatory.

Our way from Munich to Vienna took us by rail through Salzburg, Mozart's old home, to Linz, and thence by boat down the Danube.

At Vienna of course we found abundance to interest and please in art and architecture. We were also especially struck with the resemblance of the Viennese to New Yorkers. In general appearance, in manner of moving, and all externals excepting speech alone, the people of Vienna seemed to me less foreign than those of any other city I was in during the summer. As astronomers, however, our special interest lay in the grand observatory recently erected there and its inhabitants and apparatus. The building, distinctly the finest astronomical structure in the world, is situated on an eminence known as the Türkenschanze, about three miles west of the city. As at Greenwich and Meudon, the observatory commands a noble prospect, with its horizon limited eastward, beyond the city, by the heights of Schönbrunn; to the south and west, by the Austrian Alps.

The director, Dr. E. Weiss, happened to be out of town, but his lieutenant, Dr. Palisa, the mighty and relentless hunter of asteroids, was at home, and gave us a hearty welcome. He is a man of thirty-five or so, tall, brown, and lank, keen-eyed, quick-witted, and very hard to tire.

We were of course specially interested in the great 27-inch equatorial, the masterpiece of Sir Howard Grubb, the Dublin optician. We found it *optically* a most satisfactory instrument, distinctly more powerful than the Princeton tele-

scope—as naturally it ought to be, having a diameter four inches greater; but mechanically the mounting appeared rather clumsy and inconvenient. We looked through it at a number of more or less familiar objects, and made a somewhat careful study of the beautiful "ring-nebula" in Lyra in connection with Dr. Spitaler, the young assistant who is working up the nebulæ with the instrument. He is also engaged in a very promising attempt to utilize the instrument for photography. The object-glass not having been constructed for this purpose, the ordinary methods of course fail; but by following out the plan suggested by Vogel, of Potsdam, using a sensitive plate treated with eosin, and inserting a yellow glass in front of it, it is found possible to get excellent results from objects sufficiently bright. While we were present Dr. Spitaler made one moon-picture with an exposure of little more than one second.

It is unfortunate that, after building this magnificent observatory, the Austrian Government should be compelled by its financial embarrassments to support it very meagrely; if a small part of the money which was expended on the structure were now available for running expenses, the return of results would be vastly increased.

There is another excellent private observatory at Ottakring, in the suburbs of Vienna, established by and belonging to Herr von Kuffner, but we had not the time to visit it.

From Vienna we turned our course northward toward Berlin through Prague and Dresden. Our day at Prague was a very interesting one; for the place is full of old astronomical associations, as well as of imperial and ecclesiastical memories. There lived the Emperor Rudolph, the enlightened patron of astronomy, and there Tycho Brahe and his pupil Kepler found a refuge from persecution, and did some of their best work. From a strictly scientific standpoint, the Prague observatory does not now amount to much. It is on the roof, and in the garret, so to speak, of the old university building, a hundred feet or more above the ground; and for the most part the instruments are too small for making observations of much scientific value. But what most attracts the visitor's attention are two old quadrants of 5 or 6 feet radius, which were actually used by Tycho and Kepler in their observations, and are still *in situ*, and in good repair; there are other instruments also, such as parallactic rules and astrolabes; and altogether I imagine the whole establishment gives one a better idea of the observatory of mediæval astrological astronomy than anything else existing; except perhaps the old observatory upon the city wall of Peking, where there yet stand a number of still larger and finer instruments of the same ante-telescopic type.

We found ourselves in Berlin on July 31st, sweltering under a temperature of 97° F., a temperature rarely attained in that part of the world. The first of August brought in the rest of our party. We remained in Berlin nearly a week, and of course took occasion to visit both the old national observatory and the new Sonnenwarte at Potsdam. The older institution, of which Encke was so long director, and in which the planet Neptune was first (optically) discovered, in 1846, remains much as it has been for many years, without any considerable additions or alterations. It is the headquarters of the Astronomisches Jahrbuch, and so the centre of a great deal of mathematical astronomy; but as a mere observatory it has rather been left behind, like that at Munich, by more modern establishments; and the building up of the city around it continually, more and more restricts its usefulness. Perhaps the most interesting things in the establishment, if we omit the genial director, Dr. Foerster, and some of his assistants, were the sealed-up clock, which has been running for many years enclosed in an air-tight case, and the new altitude and azimuth instrument by Bamberg. The Sonnenwarte, we found a very interesting place; the building is new and fine, beautifully situated on an eminence that commands a fine view of Potsdam, and of the more remote park and palace of Sans Souci, whose great fountain forms a conspicuous feature of the landscape. Everything at Potsdam was trim and orderly; but not from want of use. Dr. Vogel, the

director, is specially devoted to spectroscopy, and his second in authority, Dr. Loehse, to photography. The veteran Spoerer is there, still keeping up his researches on sun-spots, and there are a number of younger men, some working at photometry, some experimenting upon the earth's density, and others at still different problems—each on his own. While in Berlin we took an opportunity, with Dr. Foerster's introduction, to visit the optical establishment of Bamberg, who, under the direction of Dr. Vogel, is making object-glasses from the new Jena glass. We examined one of his lenses, of about 5 inches diameter. The color-correction was certainly remarkably perfect—by far the best I have ever seen; but the surfaces were either badly figured, or else (and I suspect this was the case) the glass was not very homogeneous; at any rate the images were far from satisfactory. We have been told also that the new glass is very soft and subject to corrosion.

We left Berlin for St. Petersburg on Friday forenoon, and the next evening were in the Russian capital. Our journey was pleasant; and the cars were very comfortable, especially those of the Russian train which we took on crossing the frontier at Wirballen. These Russian cars were the best we found in Europe—built of *iron*, arranged much after the plan of our Mann boudoir cars, but with larger compartments and more room for each passenger.

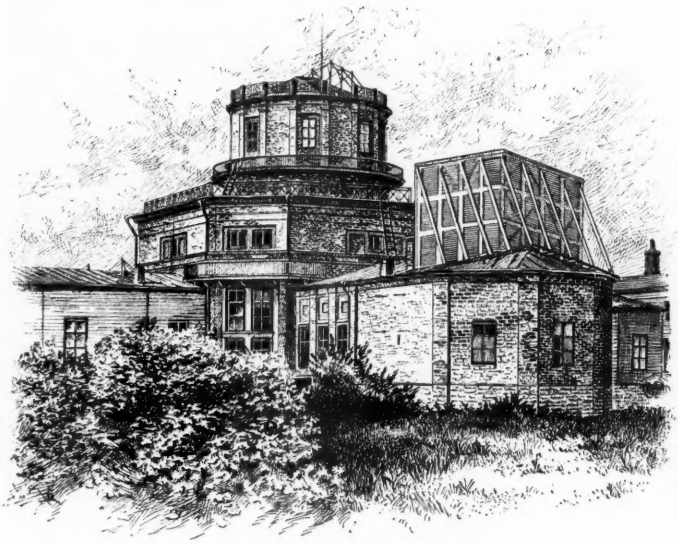
At St. Petersburg we were met at the station by Dr. Hermann Struve, the youngest son of the director, who saw our party safely settled in our hotel, and then took me with him in his carriage to Pulkowa. We reached the observatory a little before ten o'clock, just as the last twilight was fading, and the stars began to shine. A warm greeting from the noble old director and his family, a couple of hours with the great telescope, and then a good night's rest—what more could an astronomer ask for?

The observatory of Pulkowa is on a little hill about 250 feet high and about 10 miles due south of St. Petersburg, connected with the capital by a road perfectly straight and almost level until it reaches the base of the observatory hill, around which it winds at an easy grade to reach the summit. The village of Pulkowa itself is a mere hamlet, the houses mostly wooden, the majority of them not much better than huts or cabins; but the observatory and its dependencies is an imposing mass of buildings, covering several acres and containing residences for all the astronomers and employés of the establishment. It shelters between 150 and 200 people, who are under the control of the director in a relation almost patriarchal.

The observatory was founded by the Emperor Nicholas in 1839—and the ukase establishing it decrees in terms that it is always to be kept in the first rank. So far this has unquestionably been done; and at present, not only in material equipment, but as regards the amount and quality of its work, and the ability and fame of its astronomers, it stands second to no other in the world. Its special forte has been stellar astronomy, but of late it is taking up vigorously the subject of astronomical physics; and the researches, spectroscopic and photographic, of Dr. Hasselberg, who is in charge of the newly erected physical laboratory, have been most important and valuable.

The first director of the observatory was Dr. F. G. W. von Struve, who was called from Dorpat to organize and superintend the new establishment. He died in 1864, at the age of seventy-one, and was succeeded by his son, the present director, his "most high excellency" Dr. Otto von Struve. [See p. 97.] He is a tall, erect, vigorous old gentleman, not yet quite seventy years of age, whose kindly heart and courteous manners win the sincere regard of all who come to know him: and he is well known in America, for he has been here twice, once in 1879, when he gave the order for the object-glass of the great telescope which, until a few months ago, was the largest refractor in existence, and again four years later, when he came to test and accept the lens. On this occasion he made a short visit at Princeton; so that it was an old friend, and no stranger, who greeted us at Pulkowa. His younger half-brother, Baron von Struve, has been for several years the Russian minister at Washington—

always a friend of science and scientific men—and it would be simply ungrateful not to acknowledge here his kindness in preparing the way for us, by writing on our behalf to the Foreign Office at St. Petersburg.



The Russian Government Observatory at Pulkowa.

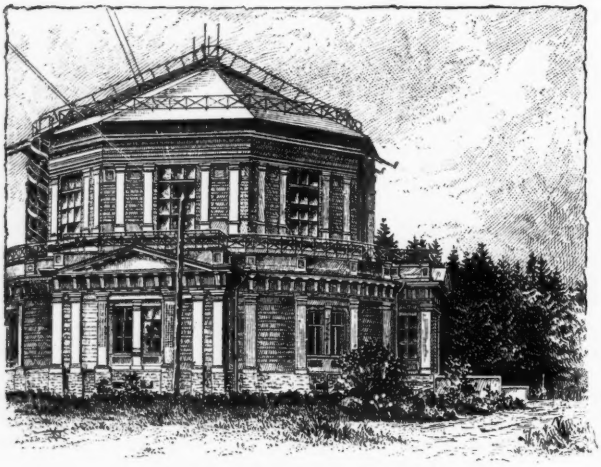
The observatory circle is a pretty large one, comprising not only the families of the director and the four astronomers, but also of several adjunct astronomers and aids of various kinds, who all live within the walls. Many of them are connected by intermarriage or relationship with Struve himself, and isolated as they are to some extent from the rest of the world, they form a little world of their own, with their own intimate and delightful social life.

During the long summer evening a merry group of young folks—and some of the older ones with them—engage in various games in the open air, ringspiel, barlauf (or prisoner's base) and croquet (which is still in vogue there) being especial favorites—tennis does not yet seem to have arrived in Russia. Then, when the darkness slowly gathers and the dew begins to fall, they all collect in the spacious parlor of the director's house, and conversation, music, and the dance fill up the remainder of the evening, until midnight sends them to rest.

The few days I spent there remain in my memory as among the pleasantest of my life: it was with a real sense of loss and pain that I bade farewell—*Auf Wiedersehen*—to the little group, the pretty children, the bright-eyed girls, the refined and gracious ladies, the cordial, thoughtful, scholarly fathers, and the energetic young men who are coming up to make good the fathers' places. On Thursday Mr. Turner, of Greenwich, and our German friends from Potsdam, were at the observatory, as well as a number of other foreign astronomers, all bound for the eclipse. We were seventeen at the dinner table, speaking seven different languages, Russian, German, French, English, Italian, and Spanish, with now and then a little Latin to help things out. To Struve had been confided by the Academy of Sciences the office of assigning stations to the different visiting astronomers, and arranging matters so as to secure the greatest convenience and efficiency. It must have been a very laborious and delicate task, and of course involved an enormous amount of correspondence as well as personal intercourse with the hundred or more foreigners who gathered themselves, for their disappointment, all along the track of the shadows.

I have not spoken of the many inter-

esting things to be seen in the Pulkowa Observatory itself. It is full of them. The library alone is enough to occupy one for a long time, rich as it is in old astronomical manuscripts, and among them a great number by Tycho Brahe and Kepler—largely astrological. We were shown the horoscope of Wallenstein, with the elaborate and detailed discussion of its significance, and Wallenstein's own notes, written upon it here and there and commenting upon the fulfilment or the reverse of its predictions. There is a museum of old astronomical instruments, and in the rotunda an extensive series of authentic portraits of great astronomers and patrons of the science. We were glad to see in an honorable place among the newer pictures the likeness of our own Professor Newcomb, thus far the only American, I believe, in the august assemblage.



Great Dome of the Pulkowa Observatory.

For the most part the instruments of the observatory have been in place since its foundation, and are so well known, from figures and descriptions, that they seemed like old acquaintances. But the great 30-inch telescope has only been mounted some two years, and was naturally an object of extreme interest to us. The object-glass, as every American proudly knows, was made in this country by the Clarks; but the mounting of the instrument is the *chef-d'œuvre* of the Repsolds, and is a miracle of ingenuity and accurate workmanship. In its main features it resembles the Strassburg instrument, but with some important modifications. Unlike any other in existence, it can be managed and directed, not only from the eye end, as is now the case with all large equatorials, but also from a platform on the pier which supports the mounting. An assistant here, at the lower extremity of the polar axis, with his note-book and chronometer before him, without stirring from his seat, can read both the Right Ascension and Declination of the instrument, or direct it to any given object—and that without interfering in any way with the ability of the observer at the eye end to control the instrument for himself if he wishes to do so. Though much larger than the great Vienna telescope, or that at Washington, it is certainly much handier than either of them. The immense dome, or rather drum, in which it is mounted, is over 60 feet in diameter, and is operated with perfect ease—by electricity. A storage battery of 50 cells is charged from time to time by a dynamo, and the machinery of the dome is driven by an electric motor, controlled by means of a switchboard.

Our week in St. Petersburg was an extremely interesting one, but our pleasure was marred by anxieties. Up to our arrival there, we had had almost uninterrupted fine weather; but now there were signs of a breaking up. Showers became frequent and violent, and the sky was lowering most of the time. Leaving the ladies of the party to follow

later with a courier, the gentlemen started on Monday evening (August 15) in company with Dr. Struve, who was to occupy a station not very far from us. The place he had selected for our observations was at Ustpenskoïe, a country seat some eight miles east of Rschew, a city of about 20,000 inhabitants, situated on the upper (but still navigable) Volga, at the terminus of a railway which branches off to the southwest from the main line between St. Petersburg and Moscow, leaving it at Ostaschkowo, a point about 130 miles northwest from Moscow.

The place had been offered to Dr. Struve for the use of the American party by its owners, two wealthy young married ladies, Madame Olga Nieskowski, and Madame Vera Tchernicheff, to whom I desire here to offer our most hearty and respectful thanks for their liberal kindness in the matter. They were not there themselves during our stay, as they reside with their husbands (who are officers in the Government service), one of them at Warsaw and the other at Torschok, and only occasionally visit the homestead for a summer outing. But they placed the whole establishment at our service, and arranged with M. Nieskowski, of Rschew, a connection by marriage, to come to the house, and do the honors as host. To him we owe more than we can well express for the hearty cordiality with which he welcomed and entertained us. A young officer of engineers, Captain Witkowski, had also been detailed by the War Department, at his own request, though at Struve's suggestion, to come to our station with his orderly, to assist us in our preparations, and to take upon himself the labor of the time-determinations; which was no small matter, involving as it did three or four night journeys over a roadless country to the telegraph office at Rschew, through rain and storm. We have much to be grateful for to many other Russians, but toward Captain Witkowski our feelings go deeper. We admired him for his ability and manly energy, his elevated character, and his remarkable accomplishments as a cultivated gentleman, but we learned to love him sincerely as the kindest and most unselfish of friends.

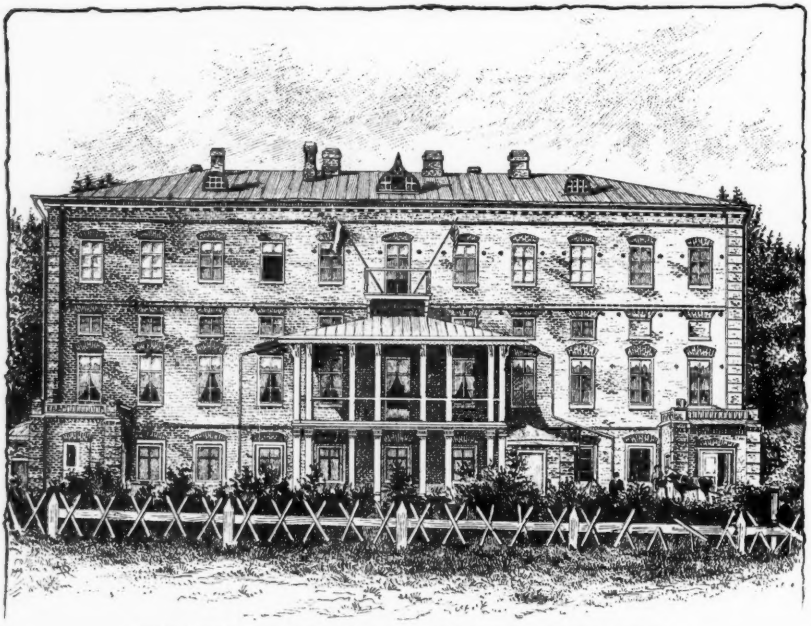
We reached our station on Tuesday noon, having dropped Struve at Torschok. The Captain, who arrived the day before, had had our boxes brought over from the railway, and had engaged the necessary laborers, so that after lunch we proceeded at once to unpack. We found everything, with few and very slight exceptions, in perfect order, and in spite of the lowering sky we had our apparatus mostly in position before it was dark. We placed our instruments in the yard north of the house, only a few rods away, so that in case of rain we could bring the delicate pieces quickly under shelter.

The house itself is a large modern brick structure, as the illustration shows. The lower floor is mostly devoted to the servants and the housekeeping department, while the upper floor contains a library and a number of plainly furnished sleeping-rooms, where we made our own quarters. The middle floor, however, containing the great hall, the parlors, the dining-room and the ladies' boudoir, is elegantly furnished. To the south the windows look out upon a large park and garden, at present perhaps a little less trimly kept than when the house was the house of the family, but still very beautiful. To the north is the kitchen garden and the yard I have spoken of, and a large open space of six or eight acres, around which are arranged the houses of the steward and some of the workmen, as well as the granaries and stables. Not far away, in a hollow, are seen the roofs of the little village in which most of the peasants of the estate have their houses; beyond, a mile and a half or so distant, lies the railway track. I do not know the size and value of the estate. It is certainly large, for the Captain said that the ladies were "*schrecklich reich.*"

We were very anxious to have pleasant weather before the eclipse in order to adjust our instruments and make some preliminary trials and observations. But Wednesday was dull and threatening all day, so that we could do nothing more than to complete the erection of our instruments. Thursday morning was clear for a short time just after sunrise, and I obtained a few sextant readings; but before the sun was

high enough to allow any spectroscopic or photographic work, it had clouded again, and the rest of the day was a repetition of Wednesday, enlivened only by the arrival of our ladies about noon.

In the evening some friends of M. Nieskowski came over from Rschew to see our instruments and operations, and about ten o'clock the clouds broke and the stars appeared. Naturally our spirits rose. The Captain put out his instrument and began a series of observations, while our party gathered in one of the lower rooms, and the ladies went through their drill with the instrument which they were to operate. But our exultation was short-lived : in less than an hour it clouded again, and when we retired at midnight it was storming as viciously as ever.



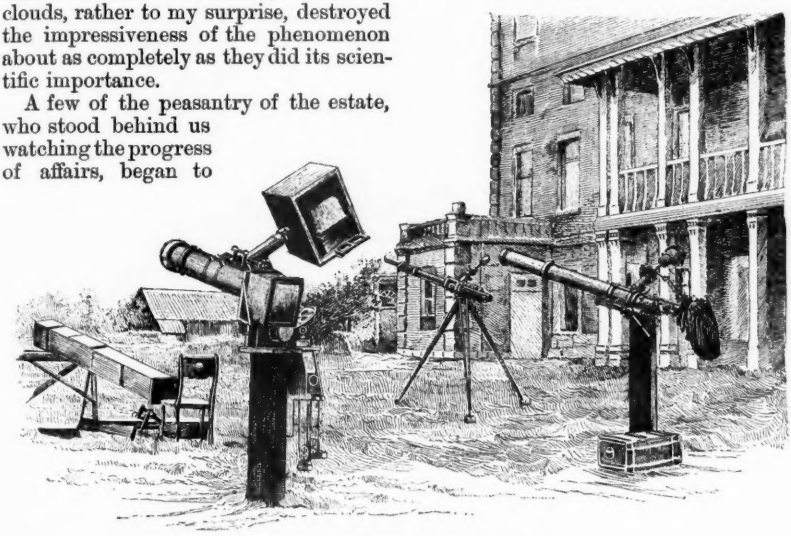
Russian Country House, used as Headquarters by the American Eclipse Observers.

On Friday morning, August 19, we were early astir, as the beginning of the eclipse was at half-past five ; but the clouds were thick and we could see nothing. Forty minutes later it was evident that the eclipse was really in progress, though the sun was still invisible. The gloom began to thicken, and as totality approached, became more and more oppressive. A few minutes before the totality the increase of the darkness was somewhat rapid, and to appearance not steady, but pulsatory. At the moment when the sun was finally covered, there was not that *sudden* fall of darkness which is usually so impressive, and we could not be sure of the critical instant, within a quarter of a minute ; at the close of the totality, some two minutes later, the access of light was on the other hand so sudden that the three observers agreed upon that instant within a fraction of a second. The obscurity at the darkest moment was by no means so great as usual during an eclipse—at least it did not seem so. It did not become too dark for reading ordinary print, and there was no difficulty in distinguishing the window panes, and even the separate bricks, in a building four or five hundred feet away. The birds and cattle seemed to be rather puzzled than

alarmed; there was none of the ludicrous consternation which I have seen manifested by domestic creatures on one or two other occasions; in fact the clouds, rather to my surprise, destroyed the impressiveness of the phenomenon about as completely as they did its scientific importance.

A few of the peasantry of the estate, who stood behind us watching the progress of affairs, began to count their beads and cross themselves when the darkness was most intense, and there was an audible expression of relief when the light suddenly increased again. We learned afterward that the priests along the line of the eclipse had been telling the people some very queer stories. One of them was that "*Anti-Christ* had come over from America to darken the sun, and that this would be followed immediately by the resurrection of the dead and the end of the world." Captain Witkowski told us that he had taken pains to explain matters to the people about our station; his position as an officer of the Czar enabling him to counteract the influence of the priests, as no private person could have done.

After the totality was over, we still remained at our posts in the forlorn hope that possibly the clouds might clear away enough to give us a chance to observe the last contact. In fact, about 7 o'clock there was a momentary opening, through which for a minute or two we dimly saw the watery disk of the sun still half covered by the receding moon; then the clouds closed in again, and there was no more sunlight at our station until after our departure. The eclipse was all over by half-past seven, and nothing remained to us but to send some telegrams announcing our defeat, to repack our instruments, and get away as soon as possible. Before night the work was nearly done; the next morning our boxes were started off for Rschew, and about three o'clock we took leave of our kind host and the Captain at the little railway station. And here let me say that everything that could be done was done by the Russians to aid our plans. Our instruments were admitted duty free, and without customs-examination, they were transshipped in St. Petersburg, and transported to our station without our agency and at very reasonable rates, and from there retransported to St. Petersburg; our station was selected for us and all arrangements were made for our free entertainment; and an officer of Engineers was detailed to go down to our station with his orderly, to aid us and look after our comfort.



Instruments in Position at the American Station.

I may add that, with a few partial exceptions, all the other visiting astrono-

mers had the same bad weather as ourselves, very few observations of any value being obtained anywhere.

At Torschok we were joined by Struve, and we enjoyed our last thirty miles with him as much as was possible under the circumstances. We were amused by a little incident at Torschok, where a considerable crowd had gathered at the station. The gentlemen of the party went out to get some refreshments, and we noticed that the people stood back to let us pass and looked at us and talked about us with an air of surprise. Struve told us that the crowd had come down from the city to see the American astronomers; and that their surprise was occasioned by the fact that we were not *red Indians*.

At Ostaschkowo, which we reached about dark, we parted with Struve, who returned to St. Petersburg, while we ourselves, after a delay of an hour or two, went on to Moscow. After a three days' stay in Moscow our route took us viâ Warsaw and Breslau to Berlin. At Warsaw we stopped a day to pay our respects to our patroness, Madame Nieskowski, and to see what we could in so short a time of the notabilia of the old Polish capital—a day well spent. We visited the observatories at Moscow and at Warsaw. But compared with the great observatories which we had recently visited, they are small establishments and present little of peculiar interest.

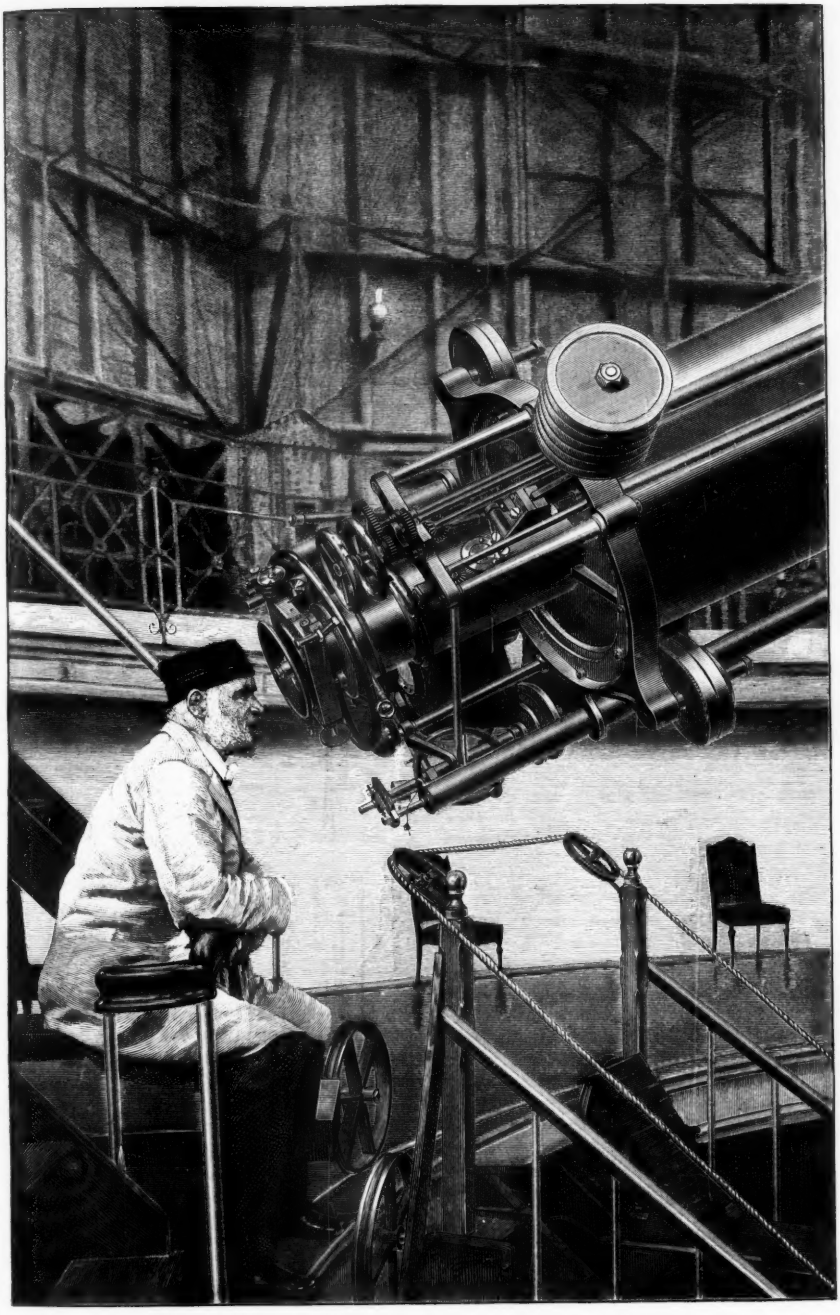
From Berlin we hastened viâ Cologne (where we spent Sunday) to London; and on the afternoon of the 31st, exactly according to programme, I was quietly in Manchester, in the house of Mr. Thomas Ashton, who some months before had been so kind as to invite me to be his guest during the meeting of the British Association for the Advancement of Science. My host was a fine specimen of the Manchester manufacturer and merchant, and my heart went out to him especially because he was one of those Lancashire men who in the dark days of our Civil War stood by us unflinchingly, at a time when such fidelity to principle was very costly.

The week was one of great enjoyment: excepting the abominable weather everything was satisfactory. I listened to many important and interesting papers; I met many persons whom I had long desired to know, and renewed old acquaintances; there were receptions, excursions, and garden-parties, and dinner-companies; there was the Mayor's banquet, and the annual gathering of the Red Lions and their "cubs." Then there was the "Jubilee" Exhibition, with its wonderful collection of pictures by the English artists of the Victorian reign.

One great privilege remained to be enjoyed. The Earl of Rosse, who had been in Princeton and whom I met in company several times during the week, kindly invited Professor Rowland and myself to go with him to Birr Castle and spend a day or two there, before our return to America. It would take too long to explain how my friend Professor R., by the stupidity of a railway servant at Liverpool, lost his baggage at Holyhead, and was obliged to give up the trip; but I was more fortunate, and after a railway ride from Dublin to Parsonstown, made interesting by Lord Rosse's conversation, we arrived at the castle on Friday noon. The afternoon was spent in roaming about the grounds and castle, and examining the instruments and the workshop. The castle itself is extremely interesting.

It is a fine old building, or pile of buildings rather—in parts *very* ancient, for Birr Castle was already old and famous when Henry II. gave it to Philip de Worcester, more than 700 years ago. About 1610 James I., in settling the affairs of Ireland, bestowed it upon Sir Lawrence Parsons, from whom it has descended to its present owners, though not always peacefully; for during the period of the civil wars, between 1640 and 1690, it was several times besieged and captured. More recently, within the present century, but I do not know the date, it was partly burned, and of course, while in the main the ancient aspect has been preserved, the interior has been much modernized.

The lawn in front of the castle is fortified by light earthworks, and there was a sixpounder field-piece in the hall behind the front door; reminiscences, I believe, of the troublous times a century ago. The grounds and gardens are ex-



Dr. Otto von Struve at the Eye-piece of the Great Telescope, Pulkowa Observatory.

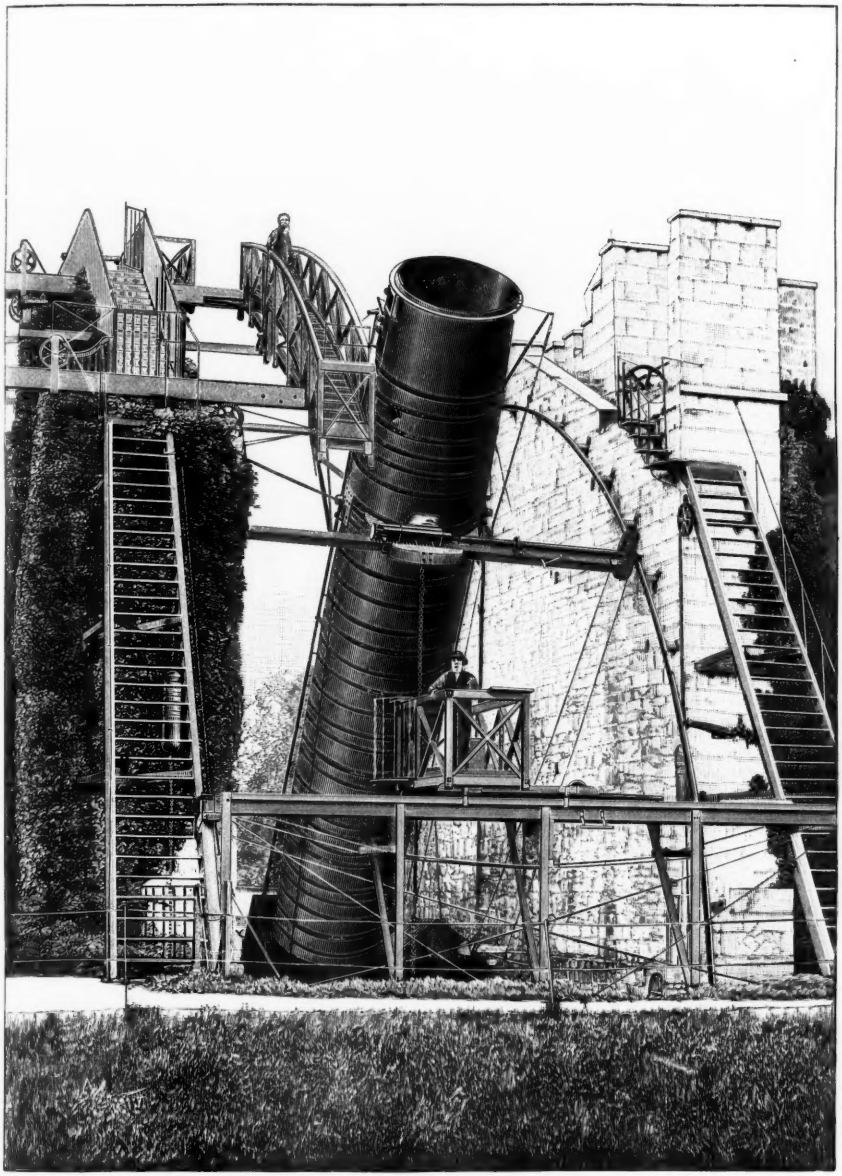
Birr Castle, Ireland—The Home of Lord Rosse.

tensive and beautiful, with fine old trees, and two little rivers which come dancing down from the hills, and at the meeting of the waters join in a wider and more placid stream which glides on to the Shannon a few miles below.

To an astronomer, of course the chief interest of the place lies in the colossal telescopes, which were constructed by the father of the present earl nearly fifty years ago, and in his hands and those of his son, have contributed so much to our knowledge of the nebulæ, and to some branches of astronomical physics. There are three of them, all reflectors: one 18 inches in diameter which is mounted in a dome of its own, one 3 feet in diameter, and the "Leviathan," of six feet aperture and nearly sixty feet in length, incomparably the most immense of all astronomical instruments, though probably in real power such great refractors as the Pulkowa telescope and that of the Lick Observatory would overmatch it. The smaller instruments have been pretty much reconstructed during recent years, and the three-foot telescope especially, as regards everything except the speculum, is far more the work of the present owner than of his father. Its equatorial mounting is of a pattern quite unique, and the arrangement by which the observer is enabled to reach the eyepiece is extremely ingenious. He stands in a sort of cage or basket which hangs from the arm of a crane that swings him around into the necessary position.

The mounting of the great telescope has also received some really important improvements of late, but they are not very conspicuous, and in the main its general appearance is the same as when first erected in 1842. In all these instruments the great concave mirror (which answers to the object-glass of a refractor) is made, not of silvered glass, as is now common, but of metal, and the speculum of the great instrument weighs nearly four tons.

At dinner time the sky was cloudy and threatening, but soon after dark it cleared away, and I had the great good fortune to be able to realize a dream of my boyhood by actually "looking through Lord Rosse's telescope." We examined with the 6-foot reflector a few stars and a number of nebulæ, and although the mirror was not quite in its best condition (not having been repolished for several years), I was agreeably

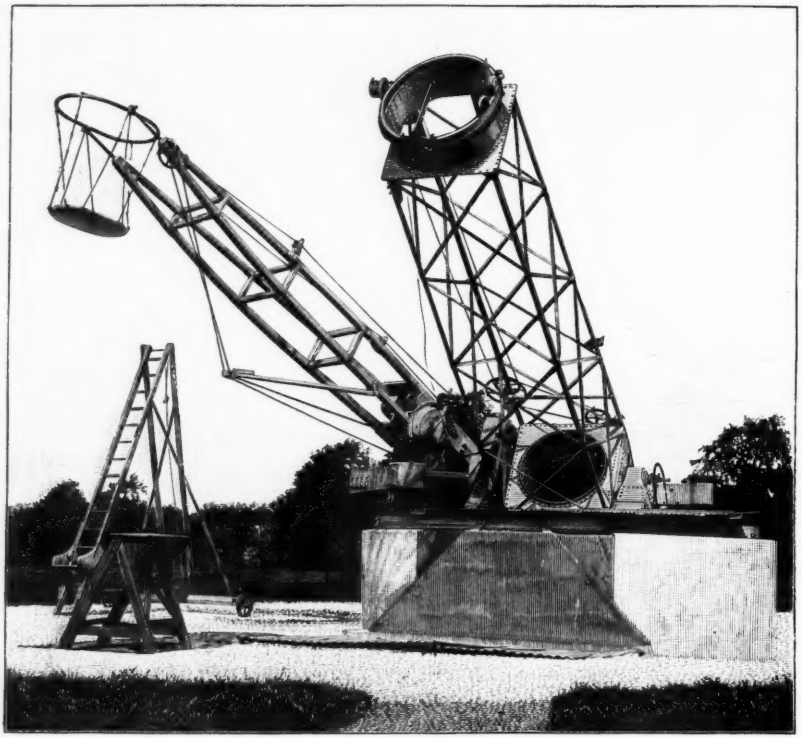


Lord Rosse's Great Reflecting Telescope—Six Feet Aperture, Sixty Feet in Length.

(From a recent photograph.)

surprised with its performance. The star-images of course were less perfect than those given by the large refractors

machinery by which these great specula are figured. But it was now Saturday noon, and in order to catch the Aurania



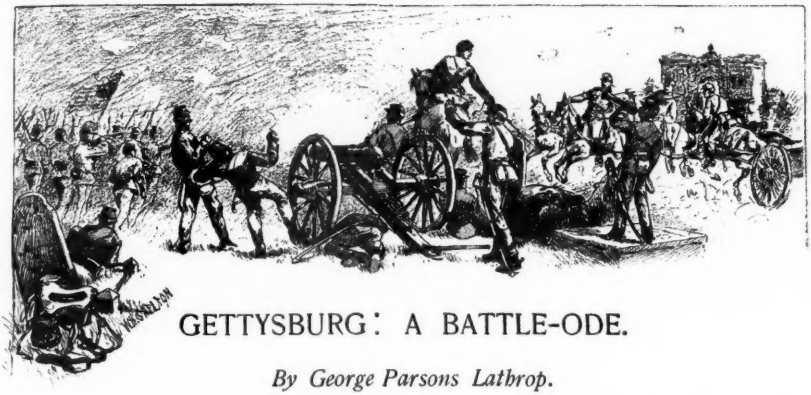
Lord Rosse's Three-foot Reflector, with Hanging Basket for the Observer.

I had seen; but the nebulæ were simply magnificent. With the three-foot instrument also we looked at a number of double-stars, no planet happening to be available.

The speculum of this instrument, like that of the larger one, was considerably tarnished, and was to be taken out and exchanged for the substitute mirror provided for the purpose; accordingly the next morning the spare mirror was put upon the polisher, and I had the pleasure of seeing the actual operation of the

at Queenstown it was necessary to cut short this most delightful visit. A five-hours' railway journey, a night's rest in Cork, and a morning's ride along the lovely shore of Queenstown Harbor, took me to the steamer; and a quiet seven days' voyage brought me home.

So far as the main purpose of our trip was concerned, it was an utter disappointment; but the trip itself and its experiences—their memory, and the new friendships—these are "a possession forever."



GETTYSBURG: A BATTLE-ODE.

By George Parsons Lathrop.

[Passages from the poem to be read before the Society of the Army of the Potomac, at Gettysburg, on the twenty-fifth anniversary of the battle, July 3, 1888.]

I.

(THE THIRD DAY.)

ONCE more the sun deploys its rays.
Third in the trilogy of battle-days,
The awful Friday comes:
A day of dread,
That should have moved with slow, averted head
And muffled feet,
Knowing what streams of pure blood shed,
What broken hearts and wounded lives must meet
Its pitiless tread.
At dawn, like monster mastiffs baying,
Federal cannon with a din affraying
Hailed the old Stonewall brigade,
That eagerly and undismayed
Charged, and slowly was repelled
After four hours' bitter fighting,
Forth and back, with bayonets biting;
Where, in years to come, the wood—
Flayed and pierced by bullets—stood,
Its trees all wasted, withered, gray
Like marshalled skeletons, to mark
The place of combat, night and day,
With presence grimly still and stark.
Then there's a lull: the troops are spelled:
No sound of guns or drums
Disturbs the air:
Only the insect-chorus faintly hums,
Chirping around the dull yet sleepless dead,
Scattered or fallen in heaps and wild outspread;
Forgotten fragments left in hurried flight;
Forms that, a few hours since, were human creatures,
Now blasted of their features,
Or stamped with blank despair;

Or with dumb faces smiling as for gladness,
But stricken with utter blight
Of motionless, inert, and hopeless sadness.
Fear you the naked horrors of a war?
Then cherish peace, and take up arms no more;
For if you fight you must
Behold your brothers' dust
Dishonored and ground down
And mixed with blood and powder,
To write the annals of renown
That make a nation prouder!

II.

All is quiet till one o'clock:
Then the hundred and fifty guns,
Metal loaded with metal in tons,
Massed by Lee, send out their shock:
And, with a movement magnificent,
Pickett, the golden-haired leader,
Thousands and thousands flings onward, as if he sent
Merely a meek interceder.
Steadily sure his division advances,
Gay as the light on its weapons that dances.
Agonized screams of the shell
The doom that it carries foretell:
Rifle-balls whistle like sea-birds singing;
And limbs are shred and souls set winging;
But Pickett's soldiers never waver.
Show me in all the world anything braver
Than the bold sweep of his fearless battalions
Three half-miles over ground unsheltered,
Up to the cannon, where regiments weltered
Prone in the batteries' blast that raked
Swaths of men and, flamed-tongued, drank
Their blood with fiery thirst unslaked!
Armistead, Kemper and Pettigrew
Rush on the Union men, rank against rank;
Planting their battle-flags high on the crest.
Pause not the warriors, nor dream they of rest,
Till they fall with enemies' guns at the breast,
And the shriek in their ears of the wounded artillery stallions!
So Pickett charged, a man indued
With knightly power to lead a multitude
And bring to fame the scarred, surviving few.
The Ridge was wreathed with angry fire,
As flames rise round a martyr's stake:
Brave men were offered on that pyre,
Who perished for our dear land's sake.
Far up in heaven the gray clouds flew,
And mingled with the deathless blue;
While here, below, the blue and gray
Melted minglingly away,
Mirroring heaven, to make another day.
And we who are Americans, we pray
The splendor of strength that Gettysburg knew
May light the long generations with glorious ray,
And keep us undyingly true!

III.

(REQUIEM.)

Dear are the dead we weep for;
  Dear are the strong hearts broken,
Whose memory still we keep for
  Our help and hope, a token
Of sacred thought too deep for
  The words that leave it unspoken.
All that we know of fairest
  All that we feel of meetest,
Here we bring for the rarest
  Doers, whose souls rose fleetest
And in their homes of air rest,
  Ranked with the truest and sweetest.
Days with fiery-hearted, bold advances;
  Nights in dim and shadowy, swift retreat;
Rains that rush with bright, embattled lances
  Thunder, booming round your stirless feet;
Winds that set the orchard with sweet fancies
  All abloom, or ripple the ripening wheat;
Moonlight, starlight, on your mute graves falling;
  Dew, distilled as tears unbidden flow;
Dust of drouth in drifts and layers crawling;
  Lulling dreams of softly whispering snow;
Happy birds from leafy coverts calling;—
  These go on, yet none of these you know;
    Hearing not our human voices
    Speaking to you all in vain,
  Nor the psalm of a land that rejoices,
Ringing from churches and cities and foundries its mighty refrain!
But the sun and the birds, and the frost, and the breezes that blow
When tempests are striving and lightnings of heaven are spent,
    With one consent
    Make unto them
  Who died for us eternal requiem!

* * * * * *

IV.

Two hostile bullets in mid-air
    Together shocked,
    And swift were locked
Forever in a firm embrace.
Then let us men have so much grace,
  To take the bullets' place
  And learn that we are held
    By laws that weld
    Our hearts together!
As once we battled hand to hand,
So hand in hand to-day we stand,
    Sworn to each other,
    Brother and brother,
In storm and mist, or calm translucent weather:
  And Gettysburg's guns, with death-dealing roar
  Echoed from ocean to ocean, shall pour
  Quickening life to the nation's core;
    Filling our minds again
With the spirit of those who wrought in the Field of the Flower of Men!

FIRST HARVESTS.

By F. J. Stimson.

CHAPTER XXI.

A HOUSE BUILT WITH HANDS.

CHARLIE TOWNLEY'S ways were not like the ways of other young stock-brokers. He worked at the most unusual times, and usually made ostentation of idleness. Many others much delighted him by thinking him a fool, chiefly because he wore a single eye-glass; and had a drawl, up-town. He had begun the summer—in the latter part of May, after Arthur had gone to Mrs. Gower's—by showing a considerable amount of attention to no greater a person than Miss Mamie Livingstone; thereby delighting her (as yet rudimentary) soul. The rest of his mind seemed given, as usual, to his person, his other equipages, and the various fashionable meetings of the season. His homage to Miss Mamie had been of the ostentatious variety, rendered at races and at horse-shows. He had even invited her to drive out to the Hill-and-Dale Club with him in his dog-cart; and it had only been as a favor reluctantly accorded to Gracie that she had not gone. Mamie was convinced that such an expedition would make her the most talked of débutante of the coming season; and she knew that in society (as perhaps in other things to-day) the main element of success is advertisement. When an article has once attracted notice, a clever person can make that notice favorable or the reverse almost at will.

But Gracie was gaining a very powerful influence over Mamie—almost as powerful as all the world outside. Her parents possessed none; they were not only of a previous generation, but *ex officio* prejudiced advisers; the girl of the period holds their evidence almost as cheaply as the business man holds his minister's upon theological subjects. Herein also was she a girl of our age, when men go to Ingersoll and Tyndall for their theories of the unknown God, and their wives to faith-cures and esoteric Buddhism for the practice of Christianity, and leave the outworn Scriptures. Still, a nature like Gracie's had its effect, even upon a girl like Mamie. She was too quick not to be conscious of this, and sought to make it up by chaffing and patronizing her elder cousin.

When Gracie persuaded Mamie to go with her to Great Barrington, Charlie was left entirely to his own devices. Some reader may say, his vices; but Charlie was not more vicious than another. He was almost alone—always excepting Mr. Phineas Tamms—in the office that summer. He showed, nevertheless, no desire to get away, but manifested a very strict attention to business. If Arthur had but known it, he had only been asked in Charlie's place upon the coaching party; but Charlie was one who never made himself the cause of another's knowing a disagreeable fact. He had his room permanently taken at Manhattan Beach; and he divided his leisure between this and divers clubs, urban and suburban. Occasionally he passed a Sunday on the yacht of an acquaintance.

Old Mr. Townley still dropped into the office two or three times a week; he still fancied their reputation unchanged, and the business the same as in the old concern of Charles Townley & Son, before they had helped young Tamms out of difficulties and given him a clerkship in the firm; and he bobbed his gray head sagely over Tamms's exposition of his plans. Business was quiet enough. But after the old gentleman had fairly gone to Newport for the summer, things seemed to take a little start. Tamms's family were away, his wife and two showy daughters travelling in Europe by themselves, and spending a great deal of money. Tamms himself

lived at a small hotel down at Long Branch, where he had his private wire, and where he would occasionally rest a day in rustic seclusion, having his mail and stock-reports brought down to him to read. For Tamms never read books: like Mrs. Gower, he preferred the realities.

One day early in August Charlie was invited to go down and spend the night with his master, "the Governor," as Charlie termed him. He marvelled much at this, and went with much curiosity, never having witnessed any of Mr. Tamms's domestic arrangements. He knew that Tamms's womankind were travelling abroad; for he had had frequent occasion to cash their drafts. He had often speculated at their lack of social ambition on this side the ocean, and had come to the conclusion that it was either because they thought it easier "over there," or because Tamms deemed the time had not come for that as yet. But if not, why not?

Charlie took a little leather satchel with him, filled with railway reports, letters, telegrams, prospectuses, and other business documents. His dressing-case went by express. The boat was crammed with excursionists, clerks and their female friends, common people, as Charlie would have called them, evidently going down and back for the sail. Charlie secured a stool upon the upper deck, lit a cigar, and buried his thoughts in the stock-report of the afternoon paper; while the steamer made its way down the teeming harbor, by the base of the statue of Liberty, then being erected, past a Russian man-of-war, and through the green-shored Narrows.

To a patriot turned pessimist, there is something typical in the Jersey shore, the first American coast one sees in coming from the other world. Think of the last coast you leave—Cornwall, for instance—with its bold rocks, its glorious cliffs, its lofty castles that have been strongholds, at least, of courage and of faith; fit selvage for a land which sometime felt the nobility and the sacrifice of life. And then look at the long, low, monotonous strip of sand, the ragged, mean bank of crumbling clay, where the continent merely seems, as it were, sawed off, and ends with as little majesty as some new railway embankment. On the little bluff a gaudy row of cheap, undurable houses and hotels; even the sea seems but an anticlimax, a necessary but uninspiring end of things, devoid of dignity if not of danger. But the Jersey shore is not the coast of all the continent, nor is the city of New York America.

Charlie was not troubled by these things; they seemed as natural to him as the pink strip that marks the boundary of an atlas map. New York was an excellent place to make money in; and these things go well with materialism. The boat made its landing, and Charlie walked up the long pier through the crowd—a crowd of summer boarders, seeking rest, and who, finding overmuch repose, had come down to see the evening steamer land, for the sake of excitement. The great rollers foamed in beneath the pier, lashing the piles indignantly; and the sea on either side was speckled with bathers—children, men, and women, the last looking their unloveliest in bathing-gowns.

The avenue at the pier-head was crammed with carriages—ladies, bored with the long day, who had come there for the last faint simulacrum of pleasure that the being seen in their own equipages still afforded them; other ladies waiting for their tired husbands from the city. In a handsome victoria with two long-tailed horses Charlie made out his host; and throwing up his overcoat and satchel, took his seat beside him.

"Hot in town?" said Tamms, laconically.

"Beastly," answered Charlie.

"We might as well take a drive, I suppose; there's nothing else to do before dinner."

Charlie silently assented; and they took their way along the red-clay road; on the left the wooden walk and railing above the gullied bank that met the sea, on the right a long succession of eating-houses and candy stores; then huge barracks of hotels, then fantastic wooden villas, which wildest fantasies of paint and stained shingles had sought to torture into architecture. Not a tree was to be seen; and the vast assemblage of human habitations in the sandy plain resembled more a village of prairie dogs

than anything else a traveller's mind could have suggested.

"Land is immensely valuable here," said Tamms. "That's Deacon Thompson's place; he paid thirty thousand for it two years ago, and he says he's been offered fifty since." Charlie looked at the red-and-green structure, with its little paddock of lawn, and felt that it would not satisfy him; and yet he possessed not even thirty thousand dollars.

"Pretty place," said Tamms.

Charlie assented. "Now what does a man like that want money for?" he argued to himself. But Tamms, having paid this tribute to the æsthetic side of life, proceeded to open his telegrams, and cast a hasty eye on the stock reports in Charlie's paper; then they both conversed of stocks and bonds. And after driving some three miles above the water (which made continual murmur at their feet) they drove back the way they came. At Elberon, Tamms pointed out the cottage where Garfield died.

"I see the Starbuck Oil has declared its usual dividend," said Charlie, watching his chief closely. "The boys say it wasn't earned."

"I don't suppose the directors would have paid it if they hadn't earned it," said Tamms, sharply. Now Tamms, since they had purchased the control, was one of the directors.

"I suppose not," said Charlie. "I was merely saying what the boys say."

"Humph!" was all the reply his host vouchsafed to this; and by this time they were driving into the carefully pebbled avenue of "The Mistletoe," which was Mr. Tamms's abode. It was a small hotel, partly surrounded by glass galleries, in one of which three young men were sitting at a lunch-table, over claret and seltzer and liqueurs, though it was after six o'clock. The house was most ornately furnished; a little yellow-haired girl of twelve, dressed in pale lilac silk, with a short skirt, and mauve silk stockings on her long little legs, was standing at the counter talking to the clerk. All the servants were in livery, and Charlie made a mental note that the place was unexpectedly "swell."

"You want to go up to your room before dinner, I suppose," said Tamms, as if making a concession to Charlie's juvenile weaknesses. Charlie found his room a small apartment, with a rather expensive carpet and a most overpowering wall-paper; and it had the unusual luxury of a dressing-room attached. The sea was quite out of sight; but his room looked out upon the dusty street, and a printed placard on the wall informed him that its cost was twelve dollars a day. There was neither view, nor hills, nor country, nor even trees (save a line of petted young oaks that gave the place its name), in sight; but in every direction the eye was met by scores upon scores of wooden houses; and on the clipped grass that struggled with the red-clay plain the sun's rays still beat mercilessly.

They dined sumptuously; and had champagne, which was, with Tamms, the only alternative for water. A score or so of richly dressed ladies, with their husbands, were at the tables, including the little girl in lilac silk, who drank champagne also. The mother of the little girl—a magnificent woman, with black hair, carefully dressed, like a salad—sat opposite them; and her husband leaned his elbow on the table and his beard upon the palm of his hand, and talked to Tamms, between the courses. Charlie was introduced as "a young man in my office," and was treated by the lady with undissembled scorn; indeed, she condescended even to Tamms. And Charlie felt all the delight of some explorer landed among savages, who prefer colored beads to diamonds. "Positively," thought Charlie, "she does not even know that I am Charlie Townley!" Mrs. Haberman certainly did not, and would have refused him her daughter's hand in marriage, that evening, had he asked for it. And again it occurred to Charlie that wealth was the one universal good, after all.

Tamms certainly thought so; and when they got out on the piazza, began to talk about it. "Mr. Townley," said he, "I think I have observed that while you are not over attentive to the business, you can keep a secret."

"You are very kind, sir," said Charlie.

"The fact is, the Starbuck Oil Company has proved a very bad investment indeed for the Allegheny Central Railroad Company."

"Dear me!" said Charlie, sympathetically, but as if inviting further confidence. Tamms looked at him for a moment, and then went on:

"The oil works showed the usual profit, but upon closing the accounts of the first year of the new terminal enterprise, we find that the property has failed to pay even its running expenses. In fact the company will probably default on the next coupon of the Terminal bonds.—How many of them have we left?"

Charlie was silent a moment, as if to count.

"Only a little over a hundred thousand," said Charlie, "not counting those we are carrying for our customers."

"You will of course have to look after their margins," said Tamms, absent-mindedly. "Sell at once if they do not respond."

("The old Shylock!") thought Charlie. "Certainly, sir," he said. "Shall I sell the hundred thousand we have left of our own?"

Tamms looked at our young friend sternly. "And profit by our official knowledge of the coming default? Certainly not, sir. We will bear our loss with the rest." And Tamms drew himself up and placed his right hand in the breast of his black frock-coat, much as if he were addressing posterity—or a newspaper reporter, as Charlie reflected. This sudden high moral attitude was admirable, if inexplicable.

"But," said Charlie, "the bonds being guaranteed by the Allegheny Central Railroad——"

"Guaranteed by the Allegheny Central?" interrupted Tamms, in astonishment, his whity-blue eyes opened to their fullest extent.

"That was certainly my impression, sir," faltered Charlie. For he remembered that he himself had composed a newspaper item to that effect.

"Here is the original circular under which the bonds were issued," said Tamms, with dignity; and Charlie cast his eye over it timorously. There was certainly nothing in it about a guaranty, though Charlie had a distinct impression that when the bonds were "listed" on the Stock Exchange this had been the general understanding.

"You must be thinking of some mere newspaper rumor," added Tamms.

"Very possibly, sir," Charlie replied, meekly; and just then an elaborately dressed woman of rather flamboyant appearance passed through the glass-covered piazza in which they were sitting, and Mr. Tamms scrambled hastily upon his feet and bowed. Charlie followed suit, though surprised at this unusual demonstration of his impassive principal; and as he looked at him, he fancied that he saw the faintest trace of some embarrassment.

"She is not a guest of the hotel," said Tamms. "Her name is Beaumont, I believe; she owns an adjoining cottage."

"Dear me!" said Charlie. "That is very bad for people who own the stock."

"Own what stock?" said Tamms.

"The Starbuck Oil," said Charlie, in a tone as if adding "of course."

"Oh, ah, yes," said Tamms. "It is most unfortunate. Still, they should have exchanged it for Allegheny Central when we gave them the chance."

Charlie suddenly remembered that all the stock had not been exchanged.

"I suppose our people hold a majority, of course," said Charlie. And again he looked at Tamms.

But to this Mr. Tamms vouchsafed no answer; he apparently did not hear it, for he was already rising and putting on his gloves. "Shall we take a stroll?"

"I should like nothing better," said Charlie, heartily; and Tamms having sent for two cigars (for which, as Charlie noted, he paid fifty cents apiece), they took their way across the close-cropped lawn.

"That, I am told," said Mr. Tamms, pointing to a gayly lighted pagoda opposite, "which they call the Maryland Club, is in reality nothing better than a gambling house."

"Dear me!" said Charlie.

"It is an outrage upon our civilization that such social plague-spots are openly tolerated;" a sentiment from which Charlie could not withhold his assent, though he was glad the darkness prevented Mr. Tamms from seeing the smile which accompanied it. Nothing more was said between them for some time; Mr. Tamms was evidently wrapped in thoughts of business, and Charlie, for

his part, was considering where and how, in what previous state of her existence, he had known Mrs. Beaumont before.

So musing, they came to the plank-walk above the sea; it was almost deserted of promenaders, and below it, from the darkness of the night, came in the long ocean rollers, shining whitely on the shallow beach, as if gifted with some radiance of their own. They leaned some time over a railing by a bath-pavilion, and watched the breakers in silence; some women were in the sea—it was the servants from the hotel, bathing in the only hour that was allowed to them. And from the great hotel behind them came some vulgar music from a band.

"They are having a ball at the Beau-Monde to-night, I believe," said Tamms, at last. "Would you like to look in?"

Charlie professed his willingness; and they walked across the dusty street to the huge caravanserai, its hundred windows flaming with light. They found the veranda crowded with perhaps a thousand people, sitting in groups, the ladies in white or low-necked dresses, their diamond ear-rings flashing thick as fire-flies above a summer swamp. Among them were numerous Jews and Jewesses; the latter, at least, a splendid, full-blooded, earth-compelling race, though their males more wizened. In the great ball-room some score or more of children were dancing to a waltz, but no grown people as yet. These were as elegantly attired as their parents, only that they did not wear low-necked gowns, but in lieu of this had short skirts and gay silk stockings reaching well above the knee. Among them was the twelve-year-old miss in lilac from the Mistletoe; and many of these had already diamond solitaires and more than the airs and graces of a woman of the world. Their cheeks were flushed, and their long hair tossing about them; some few were romping frankly, but most were too dignified for this; and as their silk sashes fluttered and their silk stockings twinkled in the dance, they were undeniably a pretty sight, and might have been a pleasant one, to their mothers. But I think a country hay-mow had been better for them.

But these same mothers were sitting on the piazza outside, not yet too old to flirt, and taking more pleasure in showing off their dresses than perhaps their children did, as yet. And those who were too ill-favored by Heaven for this could at least talk about spending money, and about each other. Tamms soon found a congenial group, a group consisting of Mrs. Beaumont and himself; and Charlie was left to his own devices. He drifted into the bar-room and took a drink, by way of killing time; and hereabout he found the husbands mostly congregated. And, as their wives had been talking of spending money, they were talking about making it; and Charlie listened some time and then went home alone.

When he got to the Mistletoe, he called for a telegraph blank and wrote a telegram to Mrs. Levison Gower. It ran as follows:

"I think you had better sell your Starbuck Oil. Who is attending to your affairs in town? C. T."

Surely, with all his faults, our friend thus proved himself a knight faithful and loyal, *à la mode*. But having written it, Charlie remembered that he did not know where to send it; for Mrs. Gower was off in a chariot which bore no freight of worldly care. Was she not mistress of Aladdin's lamp? She had but to rub a finger, and all things were heaped at her feet. Aye; but the slaves of the lamp, who were they? Suppose they were not faithful; suppose they proved unruly and rose up in revolt? Did not even an Aladdin's slave turn out to be one of the Genii?

Townley liked Mrs. Gower, and did not wish her to be humbled. Socially, she helped him still. Should he say Lenox? He thought a moment; and the upshot of his deliberations was a resolve to do nothing for a day at least. Whereupon he went to bed, and, let us hope, to pleasant dreams.

For he could not quite account for Tamms's virtuous refusal to sell their own bonds before the coming default.

CHAPTER XXII.

THE SLAVES OF THE LAMP.

"You had better not go back to-day," said Mr. Tamms to Charlie when he came down in the morning. "They can

get along without you at the office; besides, I should like you to drive with me to Ocean Grove." Charlie was always ready enough to get along without the office, even if the converse of that proposition had not been unusual enough upon the lips of Mr. Tamms to excite his curiosity. So the long-tailed fast horses were brought out in the trotting-buggy, and, well provided with cigars and morning papers, the two set forth upon their journey. It was a piping hot day; the glaring surface of the sea lay still beside them, and the straight, unshaded, red-clay road seemed to be rapidly baking into brick. Mrs. Haberman came to see them off, robed still in a sort of gorgeous bedchamber arrangement of pale silk and laces, the inevitable large diamonds still in her ears. For some miles their way was the same they had taken the day before, along the rows of shadeless villas, each "cottage" more ornate and ramifying than the last; then they came to a long rise of the sweltering fields, past a thin grove of pines, a few cheaper boarding-houses, and a swamp with an artificial pond. Beyond this the hotels began again; and they crossed a long lagoon that looked like some breeding-place for fevers and lay between two great wooden cities; these were Asbury Park and Ocean Grove; and in front of them was still the sea.

Many of the cottages were here the merest little wooden boxes, some of them put together still more informally, of canvas and of poles, so that one looked through the whole domestic range, from the front part, which was a parlor, through the open family bedroom to the kitchen behind. These were the abodes of those who (not like the dwellers at Long Branch) came here in search of religious experiences; but Charlie saw, save a Bible text or two in chromo, no visible evidence of the higher life. Paterfamilias was usually lolling, unbuttoned as to waistcoat, in the front part of the establishment; materfamilias, in an indescribable white gown that seemed but a shapeless covering for divers toilet sins, was busied with housewifely duties; and the *filia pulchrior* was commonly set forth in a hammock upon the little piazza, lost in some novel of "The Duchess" or of "Bertha Clay," but not too lost in those entrancing pages to cast some very collected glances at Charlie and his patron's handsome equipage.

There were fewer "saloons" than at Long Branch; but even more confectioners' shops and summer circulating libraries; and plenty of hotels. Before the largest of these, Mr. Tamms drew up his steaming horses, and asked of the sable yet proud young porter if Mr. Remington were in. "Deacon Remington is down at the beach, sah," was the reply; and Mr. Tamms gave orders for his horses to be rubbed and cared for, while they sought the Deacon (who seemed a person of much prominence at Ocean Grove) on foot.

Plank-walks led in all directions through the streets, which otherwise would have been heavy walking, in the heaped-up sand; for there was no turf nor other vegetation, except where an artificial *platebande* of red leaves and greenhouse plants was fostered at the street corners. They took the walk which led seaward, passing one or two huge wooden tabernacles where sermons, meetings, or other Methodist functions were performed every day, as frequent wooden placards informed them. But they were empty now; and Charlie could see the theatre of rows of rising seats, much like the band-pavilion at a beach less sacred than was this. They crossed the end of the fresh-water lagoon, passed a flotilla of pleasure boats, and ascended to the sandy shore; here, from the crest of the beach, the walk led upward still, supported on piles, to the great ocean pier, a sort of sublimated piazza, double or triple decked, roofed, and extending far along the beach before them, with a pier projecting far out over the sea. Here was the population of the place assembled, knitting, reading, or doing nothing to the music of a brass band which, stationed at the outer end of the pavilion, was performing revival hymns. It seemed to Charlie that there must be some thousands of people on this pier alone; and he saw that there was another deck below, and still below that the beach was strewn, like drift-wood, with humanity. The task of finding

Deacon Remington seemed hopeless, and Charlie made bold to ask why they should look further.

"The Deacon is the leader of our church," said Tamms, "and a very shrewd man. He is one of the largest stockholders in Starbuck Oil."

Charlie said nothing more; and in a moment a gaunt man rose up from a little table they were passing by and addressed Tamms eagerly. His upper lip was shaven, but otherwise his beard was unkempt; his sallow face had a worn and weary look which even the perfunctory smile that continually gleamed across it, like sheet-lightning, did not permanently relieve. "How's the madam?" said Tamms.

"My wife is here," said the Deacon; and he jerked his head in the direction of a fat and comely personage, clothed in continual gray, who was placidly knitting at the table beside them. It seemed a pity to rout her up to bow; but it had to be done, for Charlie was introduced, and she rose portentously:

"Delighted to make your acquaintance, Mr. Townley," said she, when Tamms had mentioned him. "Father, where are the girls?"

"You'll find my da'ters down on the beach, I guess," said the Deacon, thus prompted.

"I came to tell you a little about that Starbuck stock, you know," began Tamms; but the Deacon sprang up hastily again, as if this were no place for tidings of moment. "Let's walk along the beach, and find my da'ters," said he, "and then you can both come up to the house to dinner," and he led the way back to the pier-head, and then down the stairs to the lower story, where the bathing-houses were. Here the floor was less occupied; possibly because the continual passing and repassing of persons in bathing-dresses and bare feet made it uncomfortably damp and sandy. Charlie looked over the rail, and saw the beach beneath, where it was shaded by the pavilion, crowded with men and women in every conceivable variety of attitude. Many couples had scooped out hollows for themselves, where they wallowed with the sands heaped about them; others lay back to back, a huge umbrella stuck in the sand behind them, the girl usually reading aloud, the young man smoking. Many still wore their bathing-dresses, though the folds of cloth were now quite dry and it was evident that they had worn them through the morning. One pretty girl was lying with her bare feet and ankles drying in the sun and her long hair spread out upon the sand; a young man sat beside her, in a striped sleeveless jersey and tights, smoking a cigarette. Charlie could not but think of cows upon a summer's day, standing knee-deep in the pool, as he saw these varied groups in age and dress and sex all grovelling in the delicious coolness of the wet sea-sand.

"We have got to default upon the Terminal bonds, you know," were the first words Charlie heard spoken.

"No!" said Mr. Remington, open-mouthed. And he stood staring at Tamms, his long arms hanging limply to his broadcloth coat-tails.

"Yes," said Tamms; "I came down to tell you. The thing isn't known yet, you know."

Charlie fancied that a shade of color returned to the Deacon's cheeks at this announcement. "Dear me!" said he. "But I thought——"

"Come back to the hotel, Remington; we can't talk here," said Tamms, who had some difficulty in picking his way among the outstretched arms and limbs and heads of hair, many of whose owners had closed their eyes, and the way being further complicated by the gambols of playing children, and the wetness of others, in wading to their waists.

"Certainly," said the Deacon, half turning about. "And of course you'll have dinner with us. Only I wanted this young man to meet my girls. Why, here comes Sadie now." And indeed a brown-haired damsel of some twenty summers, just emerged from the sea, was running swiftly toward them. "Sadie, this is Mr. Tamms, and Mr.—Mr. Townley," and the trio bowed at a respectful distance, for Miss Remington was still extremely wet. "Sadie'll show you the shortest way back," said Mr. Remington, "and I'll go back and get the mother." Sadie gave a toss to her mane of hair, which scorned any oiled cap, as if to indicate her readiness; and

led the way up the soft banks of sand to the street and its plank-walks.

"It must be very pleasant to be able to bathe so easily," said Charlie, trying hard to walk on the plank-walk beside her and yet keep out of his fair guide's drip.

"Yes, it's ever so much nicer than dressing in the bathing-houses," said Miss Remington. "Did you drive over from the Branch? I'm told it's awfully gay there, this season;" and Charlie admitted that it was. They had now reached the main street of the town, and Charlie could not but admire the genuineness of Miss Remington's constitution, as the hot sun streamed upon her wet face and her salted locks hung heavily behind her. The hotel was now before them, and after indicating the gentlemen's parlor to her guests, she herself disappeared by a side entrance. The great parlor contained nothing of human interest but a leather-bound Bible on a marble centre-table; and Tamms and Charlie Townley soon gravitated to the piazza, where, feet upon rail, and Tamms (who smoked at all times and junctures) with a cigar in his mouth, they awaited the coming of their host. Soon he appeared, with another young lady, more slender and, if possible, wetter than Miss Sadie, walking nervously, Mrs. Remington steaming hopelessly in their wake. "My wife can't stay," said the Deacon, after the first moments of compliment had passed; "she's got to get ready for dinner. And now tell me all about it, Tamms," said he, as he drew a chair up beside them. It was curious to watch the contrast between Remington's evident nervousness and Tamms's entire self-possession; and Charlie watched it.

"Have a cigar?" said Tamms, politely drawing another black one from his pocket.

"You know I never smoke, Tamms. But what's this about the Starbuck Oil?"

"Well, you know about all there is about it," said Tamms, lazily. "It can't pay interest on the Terminal bonds, that's all. They never ought to have paid any dividend, in my opinion." This remark cleverly cut from under his feet the rejoinder Remington had in mind; and he looked at Tamms helplessly.

"This is a pretty state of things," said he, at last. "I thought the Company had consolidated with Allegheny Central."

"The Allegheny Central voted to consolidate with Starbuck Oil, but I don't know that the Starbuck Oil ever consolidated with Allegheny. The Terminal bonds were issued by the Starbuck Oil and properly authorized by the directors; but for the other question, you remember, we never got the control." This was a home-thrust; for, as Charlie now remembered, the Deacon held the balance of power in the stock; and he had always refused to commit himself upon this point. "It looks bad for Starbuck Oil—it does, indeed," added Mr. Tamms, thoughtfully, stroking his smooth chin and eying Remington closely. "And I tell you what, Remington: I felt that I had more or less got you into this thing, and I came down to tell you about it while there was yet time. There isn't money enough in the treasury to pay the September coupon; that's certain. But nobody knows it yet."

"Well," said Remington, with an evident effort, "one other thing is certain, and that is that it's nearly dinner-time. Don't you gentlemen want to brush up a bit?"

Tamms answered that it was unnecessary, and Remington left upon that pretext. But Charlie noticed that he took the door that led to the hotel telegraph office. "Remington thought that he was doing a very shrewd thing in keeping that stock," said Tamms, dryly; and he went on smoking, but kept his eyes intently fixed upon an imaginary point in air, about eighteen inches in front of his own nose.

While Charlie was watching him, the young ladies, much transmogrified, came down for dinner. But the dinner was a long and weary meal, made up of many courses; no wine was served, but the hotel made up for this by giving them, at intervals, three glasses of ice-cream.

"You must find it very pleasant here, Mrs. Remington," was Tamms's contribution to the conversation; and "We're not much acquainted yet—I think it's rather too gay," was her reply. The two Miss Remingtons showed an evi-

dent inclination to converse with Charlie, but seemed as if restrained by the presence of their elders; and Charlie was not sorry when the nuts and raisins appeared, and they took their leave. The Deacon had seemed greatly preoccupied; but he walked with them to their buggy and fast horses, and Sadie Remington with Charlie.

"Of course, you know, Tamms," said the Deacon, by way of parting, "I'm much obliged to you for the point."

"Don't mention it, Deacon, don't mention it," said Tamms, heartily, as he climbed in and gathered up the reins.

"I hope, Mr. Townley, now you've found the way, you'll be neighborly and come and see us often," said Sadie Remington. She was really a very pretty girl, thought Charlie; he had done her some injustice in her mermaid garb; and he was able to regret the impossibility of returning to Ocean Grove with some sincerity.

Tamms said very little going home; and Charlie's mind was also active. "The Governor" had certainly made of him his most intimate and confidential clerk; but such was his cleverness that Charlie felt he knew rather less of Mr. Tamms's projects than he did before. Upon one thing, after some reflection, Charlie was decided; and that was to very carefully tear up and throw away the telegram he had written the night before for Mrs. Gower. For Tamms had given too much advice to the Deacon, by half.

The next day Charlie got up betimes, and was driven to the pier by Mr. Tamms. "I need not tell you," said that gentleman, "not to say anything about what I told you, or of our seeing the Deacon yesterday."

"Of course not," said Charlie.

"The Deacon is a very overbearing man in business affairs," added Tamms, absently. "And by the way, Townley, any chance bits of Allegheny Central stock you can pick up—at the board, you may take for us."

"Certainly," said Charlie. "How much?"

"I don't particularly care—ten thousand or so, perhaps—you'll hardly get more than that. But do it quietly."

"The deuce!" thought Charlie to himself; but he held his peace; and by ten o'clock he was back at the office and hard at work. Mr. Tamms did not return; and Charlie had orders to tell everyone that he was temporarily out of Wall Street, taking his well-earned vacation at the seaside.

On that day there began to be a sudden activity in Starbuck Oil. At first the price went up a point or two; and then some thousand shares were thrown upon the market, and it fell more than twenty points. Charlie fancied that the selling came from the good Deacon; but who the buyers were, his sharpest investigations failed to show. On the day after, there were rumors of a coming deficit, and the stock went down with a rush, carrying with it the Terminal bonds. The same afternoon there was an item on the "tape" to the effect that the September coupon would probably have to be funded. The next day was a Sunday; but on Monday poor Charlie was flooded with letters, angry and beseeching, and with irate or troubled customers, who were holders of the bonds in question. He had but one course open to him: to those who had paid for the bonds, he regretted that unforeseen expenses had made the Terminal enterprise so unprofitable; and to those who had not paid for their bonds as yet, he added a polite request for further "margin."

Mr. Tamms in person dropped in late that afternoon; and Charlie told him the condition of affairs, though he could have sworn that gentleman was paying no attention to any word he spoke.

"Keep at it," he said, when Charlie had got through. "You can tell them that we, too, have a large block of bonds, besides owning nearly all the stock, and are heavy losers ourselves. No one could foresee it, of course. Mr. Townley still at Lenox, I suppose?"

Charlie said that he was, and Tamms departed, saying that he would be in again to-morrow. And Charlie went up to the Columbian Club, and read the following item in *The Evening Post:*

"The late depression in Starbuck Oil securities is believed to have been caused by the fact that the property has failed to earn its fixed charges in the past six months. The selling has come largely

from Deacon Remington, through Rawson, Lawson & Co.; and it is regarded as beyond question that the Company will default September 1st upon its mortgage bonds. The banking house of Messrs. Townley & Tamms are said to have lost largely by the failure, as they hold the bulk of the Company's stock."

"By Jove," said Charlie to himself, "I ought to have telegraphed Flossie Gower, after all."

But then he re-read the article and began to reconsider it. Charlie was a young man addicted to much reconsideration. It was a very strange thing that a responsible newspaper should go out of its way to print an item like that—an item which might seriously injure the credit of a prominent banking-house. Why (for Charlie had studied law in his youth), it was almost libellous. Tamms had read the paper before leaving the office, and had not seemed particularly disturbed. "Does he want it to be supposed we lost money?—and certainly," said Charlie to himself, "the Governor is a clever fellow."

The next day was the first of August, and Charlie had arranged to begin his summer vacation by going to Newport that afternoon. He was early at the office, but found Tamms there already, dictating to a couple of stenographers. He was tearing up little pieces of paper, crumpling them up into balls, and throwing them into one corner of the room. Now, this was a way he had when things were going to his liking; but Charlie did not venture to speak to him about the item in *The Evening Post*. Moreover, a copy of that journal lay open on his desk.

"Shall I buy any more Allegheny, sir?" said Charlie.

"How much more have we got?"

"About eight thousand shares, so far—from 91 to five-eighths."

"Buy all you can up to 92 or so," said Tamms, cheerfully. Suddenly, a still full-bodied, though rather senile voice was heard in the main office, asking for Mr. Tamms. Charlie started, and even Tamms sprang to his feet. And Charlie fancied that that gentleman's face turned, if possible, a shade paler than its wont.

"What's this, Tamms?" cried the old gentleman, already angry, as the door flew open, without heeding Charlie's presence: "What's this about the Starbuck Terminal bonds?" And Charlie could see, through the open door, the clerks in the outer office huddling their shoulders over their ledgers, in evident consciousness of a coming breeze. Mr. Townley's face was crimson with excitement, as he panted in his stiff collar, his white hair making his face seem the redder, and his bald head beady with perspiration. Tamms had always a sort of patient, semi-patronizing tone in talking over business with his senior partner; but this time he tried, and tried in vain, to resume his usual manner.

"I am sorry to say," he began slowly, "that hitherto—the Terminal property—has not proved—a profitable enterprise."

"Stuff—and—nonsense!" interposed Mr. Townley, his sputtering enunciation in strange contrast with Tamms's clear-cut tones. "You yourself told me it promised most excellently."

"So I did sir—last winter. I fear that I was mistaken," said Tamms, humbly.

"Mistaken, eh! Well, sir, and what do you propose to do about it?"

"I see nothing for it—but to fund the next coupon—and attempt a reorganization——"

"I do not mean as a director, sir; with that business you are familiar. But as a banker—as a New York merchant—as a member—damn it, sir, as a member of the house of Charles Townley & Son?" In his anger, the old gentleman had used the former name of the firm; and there was an ugly glitter in Tamms's eye, which he carefully kept from meeting old Mr. Townley's.

"As a member of the firm of Townley & Tamms," said he, "I see nothing to do but to look over our customers' margins and bear our own losses." Charlie made a motion to go.

"Stay there, Mr. Townley," ordered the old gentleman, "and learn once for all the traditions of the house of Charles Townley & Son. So, Mr. Tamms, a year after bringing out these bonds, with the ink hardly dry upon them, before the second coupon is cut, you propose that we who fathered them should stand by

and see our clients and the public, who relied upon our recommendation and our name, deceived in both?"

"I don't see what else we can do, sir. We are not the Starbuck Oil Company." Tamms tried still to patronize; but Charlie marvelled that a man who seemed so large the day before with Deacon Remington should seem so small to-day before an angry old man with white hair who had outlived his business usefulness and sputtered when he spoke.

"I will show you, then. Mr. Townley, will you please take down this letter." Charlie moved his chair to a table and wrote, while Mr. Townley dictated:

"Messrs. Townley & Tamms—regret that unforeseen circumstances—have caused an embarrassment in the affairs of the Starbuck Oil Company—but have decided to guaranty the coupons on the Terminal Trust bonds—until the property has been put upon a paying basis.—From those who prefer—Messrs. Townley & Tamms will take back the bonds sold by them—paying the price originally paid therefor, with accrued interest."

"There, sir," said Mr. Townley to Charlie, "you will have five hundred copies of that circular dated to-day and printed immediately. And Mr. Tamms, you will kindly see that a copy is mailed to every one of our correspondents and clients—or our partnership may end at once."

"Certainly, sir," said Tamms, calmly. "I presume you know what an amount of ready money this action may require?"

"No, sir, I do not," said Mr. Townley.

"It may force us into liquidation," said Mr. Tamms.

"Fiddle-de-dee," said Mr. Townley, as he rose and left the office.

Tamms looked after him long and curiously, as an artist might look after a retreating cow which had just knocked over his easel and trampled on his study of pastoral life. Charlie looked at Tamms. The hour for him to be upon the Stock Exchange had long since passed; but he still sat there, and nothing was said for some time. Finally Tamms took a bit of paper, and began to roll it up into little balls.

"It is very unnecessary for Mr. Townley to take up such a quixotic attitude," said he. "That sort of thing is all very well in Shakespeare." And he threw his little balls of paper, with great accuracy, one into each of the three other corners of the room.

"What shall I do, sir, about the circular?"

"You must have it printed at once, and mailed, as Mr. Townley directed. But Mr. Lauer will attend to that." (Lauer was the bookkeeper.) "This insane action of Townley's will require considerable ready money. You must go to the board at once, and sell some Allegheny Central." Tamms had endeavored to assume his slightly contemptuous air in speaking of his partner; but it seemed to Charlie that there was still a pallor in his sharp face that belied his jauntiness.

"How much shall I sell, sir?"

"All we've got," said Tamms, curtly. Charlie nodded, and jumped up to leave the room. When he got to the street-door a clerk came running after him. "Don't sell yourself—get Lawson, Rawson & Co. to do it," said Tamms, as he turned back. Charlie nodded again, and was off. Now, Lawson, Rawson & Co. were Deacon Remington's brokers; *ergo*, Tamms did not want people to know he was selling; *ergo*, he was selling in good earnest. It looked bad. And he had thought Tamms such a clever fellow!

Charlie was very busy at the stock-board that afternoon. He bought a few hundred shares himself, but this had little avail in staying the price against the thousands with which Lawson, Rawson & Co. deluged the market. Charlie did not trouble himself much then with thinking; he had no positive capital in the firm of Townley & Tamms; but he had a feeling that it was a critical moment for them. He could not help a slight wonder that Tamms had yielded to his senior so easily; but then he reflected that a violent rupture at such a juncture meant to Tamms even more certain financial ruin than the firm incurred by making good the Terminal bonds. Despite Charlie's strategy, and the few hundreds he bought with much vocifera-

tion, the price sagged from 93 to 90 and a fraction; and there was a wild and struggling crowd of panting men about the iron standard that bore the sign of Allegheny Central. Now and then Charlie would elbow his way into the outskirts and make a feeble bid or two; but a good-natured friend volunteered advice that it was no use, and "the best thing he could do was to wait until the Deacon had got his lines well out, and then catch him short," advice which Charlie received with a smile. At all events, the Governor could not say he had not done things well; for even his friend had not suspected that it was he who was selling.

Dick Rawson was standing in the middle, red-faced and breathless, his voice already hoarse, like a stag at bay amid a pack of leaping hounds. Charlie looked at him and for a fraction of a second caught his eye. Then Charlie looked at the wall beneath the gallery. That wall is used for members' signals, and as he watched it, a wooden lid fell back, revealing a white placard with the number 449. Now, this was Charlie's number, and it meant that there was someone for him in the lobby; he went out at once, and the number sprang back out of sight with a click, worked by some clockwork mechanism. In the lobby Charlie found a messenger with a sealed note addressed to him. It was a hastily pencilled scrawl from Rawson, the very man who was standing in the focus of the excited throng, but of course had given no sign of any understanding there.

"I have sold 11,000. Shall I go on?
R."

Charlie thought a minute; much of their stock, he knew, had been pledged at about 80, and to drive the stock below this point would cause a call for further margin. And, unless Charlie was very much mistaken, the firm of Townley & Tamms had just then no more securities to pledge. He wrote on the back of Rawson's note:

"Sell all you can down to 85.
C. T."

The boy went back upon the floor of the Exchange. Charlie did not deem it wise to follow him; but in a few minutes a renewed roar from the Allegheny Central crowd told him that his order was being executed.

He went back to the office, where he found Mr. Tamms still sitting in his private room, much as he had left him. A certain unusual idleness, a subtile air of expectation pervaded the clerks in the office, which Charlie did not fail to note. Tamms looked up at him, as he entered, but made no remark.

"We have sold over ten thousand," said Charlie.

"What's the price now?" asked Tamms.

"It broke 90," said Charlie, laconically.

"We shall know exactly in a few minutes," added Tamms, calmly. "See, I have already got a proof of Mr. Townley's proclamation." And Tamms tossed the paper to Charlie, giving the word *Proclamation* an accent that was slightly contemptuous. "You will keep the correspondence clerk to see that they are all duly mailed to-night."

Charlie went out to get his lunch, as he had had no time to eat since breakfast; and when he hurried back at a quarter after three, Rawson was there with his account. They had sold 16,400 shares at from 93 to 85¼—an average of nearly 89. "I shall not be in all day to-morrow," said Tamms to Charlie. "You will see to getting in the stock that is out as collateral, and its prompt delivery."

"I had arranged to go on my vacation to-day," said Charlie. "May I go to-morrow night?"

"Certainly—after that is done." And Tamms left the office, to all appearance unshaken by the events of the day. Charlie went to his lodgings and dressed, and then dined at his club alone.

Though he had no money stake in the firm, its success or downfall would mean much to him. With its failure went all his future, all his business prospects. And Charlie went over in his mind, for the twentieth time, the extent to which they had been injured. First, there was over four million dollars of the Termi-

nal bonds which they had sold and Mr. Townley ordered to be made good. At the best, the loss on these could hardly be under a million. Then Charlie knew, though possibly old Mr. Townley did not, that they had a very heavy holding in Starbuck Oil stock. Although Tamms had let out to him at Ocean Grove that they did not actually hold a majority, as people had supposed, they certainly held a large amount, probably as much as Mrs. Gower herself, if the Deacon had held the balance of power. But if the Terminal mortgage was foreclosed, it would possibly wipe out all the stock, and this was all dead loss. And the Allegheny Central stood them in at 85 or so, so they had not cleared a sum worth mentioning on that. And he ought to have telegraphed Mrs. Gower, after all.

For once in his life, Charlie passed a sleepless night; a thing less common to his kind than to John Haviland, for instance, he being also a healthy animal, but with a conscience. In the morning he had his trunk packed and sent to the station; and after finishing up for the day at the office, he got to the Grand Central Depot at four o'clock. But here he took the train, not for Newport, but for Lenox. Now, Mamie Livingstone was still at Great Barrington.

He opened an evening penny paper, and the first Wall Street item that attracted his attentive eye ran as follows:

"It is reported that a certain prominent banking-house, largely identified with Allegheny Central, has been hard hit by the recent developments in Starbuck Oil."

And in another part of the same paper:

"It is now believed that yesterday's selling in Allegheny was not from Deacon Remington, but long stock sold by insiders for reasons of their own."

Charlie was not surprised that their tactics were discovered. He knew that such devices as they had used might serve the purpose for the moment, but could not deceive the hundred keen-eyed men that constitute "the Street" for twenty-four hours together.

He alighted at Lenox in the cool of the evening, and went to the hotel. The country air was grateful to him, and he slept soundly. The next day he idled at the Lenox Club, waiting for his horse and dog-cart, which had been shipped the day before. In the evening they arrived, and he transferred his headquarters to the inn at Stockbridge. The following afternoon, his cart and harness well cleaned, his horse carefully groomed, and his groom riding behind in full livery, he drove over to Great Barrington and called upon Miss Holyoke — and Miss Livingstone. That is, he asked for Miss Livingstone, and left a card for Gracie. Mamie came down, all excitement; it had been getting so dull in the country, and here was Charlie, like an angel dropped from heaven all for her! "I am staying at Stockbridge, you know," said Charlie, "and I have driven over to ask if you will not come for a little drive?"

Mamie turned her pretty eyes away and blushed a little; but she was thinking of Gracie, not of him. But after all, Gracie was little older than was she; it was not politic to admit her right of chaperonage too far. So they went, and had a long drive through the woods; and never, even to married ladies, had Charlie Townley made love so charmingly. And it must be admitted, though his male friends had no inkling of it, that Charlie could, upon occasion, make love very well. And when he left, it was quite settled that he was to come again—not the next day, of course, but the day after. Poor Mamie! Poor Chloe! She did not know that it was the Starbuck Oil Company that had forced Mr. Strephon's hand.

And on the following evening, Charlie Townley, sitting at the Lenox Club, took up his *Evening Post* with some trepidation. He fully expected to see that the house of Townley & Tamms had suspended payments.

"*Allegheny Central.*

"At a meeting of the Allegheny Central Railroad Company held this morning, the following resolution and vote, introduced by Mr. Phineas L. Tamms, were unanimously adopted:

"*Whereas*, Under the terms of the late proposed consolidation of this company with the Silas Starbuck Oil Company, certain bonds of the latter company were authorized by vote of both boards

of directors, and have been duly issued, to provide for terminal facilities, wharves, etc. And although, during the process of construction, and in consequence of certain extraordinary expenses, the earnings of the Silas Starbuck Oil Company have proved temporarily insufficient to meet fixed charges, the directors of the Allegheny Central Company are convinced that the ultimate value and returns of such improvements will more than compensate for the outlay involved; therefore be it

"*Resolved*, That inasmuch as the faith and credit of the Allegheny Central Railroad Company have been largely relied upon by the investing public in purchasing said bonds, though not in terms guarantied by said company, your directors deem it proper to definitely guaranty said bonds, principal and interest.

"*Voted*, That the President and Treasurer of the Allegheny Central Railroad Company be authorized to affix the guaranty of said company, both for principal and interest, upon such bonds of the Starbuck Oil Company as shall be presented at their office for that purpose before the first day of October next."

By Jove! A great light burst upon Charlie, and the paper fell from his hands. He took it up again, and read, lower down in the same column:

"At a meeting of the Silas Starbuck Oil Company held this afternoon, a new board of directors was elected. Phineas L. Tamms was elected President, and the board is the same, with the exception of Deacon Remington, who is replaced in the new board by Adolph Lauer. It is currently reported that the control of this property has now definitely passed into the hands of Messrs. Townley & Tamms."

"Great heavens!" gasped Charlie. Lauer was merely one of their clerks. It was Tamms himself who had been buying all the Deacon's Starbuck Oil stock quietly, unknown even to Charlie; and he had sold all their own Allegheny Central; and then met his senior partner's order by causing the latter corporation to guaranty the former. He had served both God and Mammon, captured the keen Deacon, pleased his partner, and made money at the same time. And Charlie turned to the quotations.

Allegheny Central was down at 73, and the Starbuck Oil had gone up to 140; and the bonds were well above par. And Tamms had secured the reputation of an honorable financier into the bargain!

Charlie began rapidly to calculate. Tamms must have now over ten thousand Starbuck Oil, upon which he had made at least thirty dollars a share; and he had finally got the control besides. He had sold much of their Allegheny Central at nearly the highest prices, averaging 90 or so, making perhaps $200,000 here. Add to this the $100,000 or more they had made originally upon the Terminal bonds, upon which the firm's endorsement was now unnecessary, and——

"The Governor is a devilish clever fellow," concluded Charlie. And as he thought of that drive with Mamie, he feared that he himself had been too precipitate.

CHAPTER XXIII.

MAMIE GOES TO THE SHOW.

GRACIE had looked forward with a yearning she would not even to herself allow to the summer and her coming to her father's house once more. There are times when rocks and woods and fields and streams speak to us with sympathy no human being seems to have; why is it, I wonder? When nature was an enemy and men were savages, they seemed unconscious of her and thought only of each other; now that men have all learned human sympathy, and altruism is the cry, some, and those perhaps the gentlest and the noblest of us all, must fly to nature for a refuge yet. But perhaps we have not yet learned human sympathy; or perhaps it is the divine that we should have instead. Perhaps our sympathy is too often one of common objects or of common lusts. Perhaps each one seeks his glory, rather that he may dazzle others with it than lend his light to them.

But Gracie was not complex, nor analytic; it is only the diseased who

so apply the scalpel. If she ever was unhappy, she thought it willed from Heaven; or sought the cause in herself and not in other things. And at all events, she was not unhappy now, save as some lily may be sad for loneliness. Yet who would wish no lilies grew but such as serve in balls or churches? Some will tell you that all lilies are forced; not natural even there. But others of us may believe in lilies still.

And Mamie too had some of Gracie's happiness; some sense of things she had not felt before. They walked, and rode, and read together; and if Gracie dreamed, Mamie would think, more practically. But Mamie, too, had learned to love her cousin; still, perhaps, with some slight shade of patronage. Thus they had been together, until that day when Townley called and brought with him to Mamie the envied savor of the world again. She returned from her drive, full of triumph, to Gracie; and then Gracie had been forced into the thankless attitude of a duenna. Gracie could not have told why she did not quite like Charlie Townley; and Mamie had begun to pout once more. And Mamie had looked for Charlie the next day; but he did not come, nor yet the next day; and Mamie had blamed Gracie with being rude to him.

For Charlie, after reading the paper that night, had almost had his confidence in Tamms restored. He meant to marry some time, and to make his fortune by it; but he had a dread of wedlock, even gilded; as every sensible man must, he thought.

Then he had seen old Mr. Townley one day at Lenox. "I fear I did Mr. Tamms a great wrong that morning, Charlie," he had said. "He was too proud to defend himself; but I suspect he had all the arrangements made, even at that time, and felt deeply the injustice of my strictures." Charlie had thrust his tongue in his cheek at this, but had held his peace. He did not tell that Tamms had sold 12,000 Allegheny Central first. For Charlie had made a flying visit to the office; and there he saw enough to convince him that Tamms was already buying back his Allegheny Central stock again. And indeed it was obvious enough that he would have to do this in order to retain the control of the great property against the next election.

"The Governor is certainly devilish smart," said Charlie to himself; "but I fear he's almost too smart to last out my time." And the next day Charlie drove over to Great Barrington again. So his drive with Mamie was many times repeated; and though Gracie did not like it, what could she do? for, as Mamie told her, laughing, she would yield to her in anything but this. For, of what her course in the world should be, Mamie considered herself much the better judge. And Gracie could not bring herself to write and bear tales to her aunt, who was growing old, indeed, while Mr. Livingstone was still less to be thought of. For men and women, for youths and children, for mobs and voters, there is a something absurd now about all the constituted authorities; and so we laugh, and the dance goes on.

Since the affair with Deacon Remington, Tamms had taken Charlie quite into his confidence; and on the first of September surprised him with conferring the firm's signature. But, though Charlie was now a partner, he had no capital; and his added dignity gave him little more than a closer knowledge of the firm's business—and a liability for the firm's debts. But this last responsibility did not disturb his slumbers; and he continued to be as attentive as ever to Miss Livingstone.

One day, late in the month, Charlie ran up to Great Barrington for a Sunday, and, to his surprise, found Mr. Derwent there. Now, what the deuce might this fellow be doing? thought he, and looked at him askance. Derwent filled up the entire parlor, as Charlie afterward put it to Mamie, and it was impossible for him to get a word with her. "I thought you had gone to British Columbia," said Charlie to him, at last, suggestively.

"Did you?" replied the other, simply.

"My afternoon was quite spoilt, and I had come up from New York on purpose," complained Charlie, the next day, to Mamie; and by this time the speech was really true. Courting is a pleasant sport while it lasts, and Miss Living-

stone was a very pretty, bright young girl; and had it been merely flirting—but, as time went on, Townley began to take some interest in the chase for the game's sake, and not for sport only. And Charlie had come up for a special purpose, which was to get Miss Mamie to go with him to the first meet of the Bronx hounds, to be held at their kennels in the Sands country the following Tuesday.

The day before, they had had a great scene in the office. Mr. Tamms had for several weeks been off in regions unknown to Wall Street, upon his own vacation, and had just returned. Hardly had he torn open and roughly disposed of his morning mail, when in came Deacon Remington. "I am informed that Mr. Tamms is returned," he announced. "I desire to see him."

"How do you do, Deacon Remington?" said Charlie, stepping forward. "I haven't seen you since Ocean Grove, I think," he added, politely.

"I desire to have an interview with Mr. Tamms." The Deacon continued to speak with precision, ignoring Charlie's courtesies as uncalled for and unbusinesslike.

"Mr. Tamms is in his private office, I think," said Charlie, blandly. And he inducted the earnest Deacon into that apartment, and closed the door upon him, with much the feeling that one has who shuts up a monkey in a parrot-cage. This done, Charlie resumed his desk and his occupation, which latter was nothing more arduous than the writing of a note to Mamie Livingstone. "Everybody will be there," he wrote; "and I hope——"

In a few minutes the door was opened, and Mr. Tamms came out. "Mr. Townley," he said, in flutelike tones; "will you kindly step in for a moment?"

"Certainly, sir," said Charlie. He went in, and the door was closed behind them. The pious Deacon was sitting upon the lounge on one corner, with folded wings, like a large bluebottle.

"I wish you to tell Deacon Remington under what circumstances the house of Townley & Tamms were compelled to meet the deficit in the Starbuck Terminal bonds and avert foreclosure. Do you remember anything about it?"

"Certainly, sir," said Charlie. He hesitated a moment, but was much too clever to seem to look to Tamms for the cue. "It was by order of Mr. Townley himself."

"Do you remember the day?"

"It was the day after my return from Long Branch—three days after our drive to Ocean Grove."

"You see, Deacon?" said Tamms, in the meek tones of a Christian unjustly wronged.

"Oh, yes, I see," said the Deacon.

"And am I right in stating that Mr. Townley's attitude was most peremptory?" Charlie nodded. "That he went so far as to threaten a dissolution of partnership unless his orders were instantly complied with?"

"He made me mail the circulars and send one out over the tape the same afternoon," said Charlie.

Again Tamms looked to Remington. There was a silence of some minutes, rather embarrassing to two of the company, at least.

"Well, well," said Remington, at last, "I may have done you wrong, Tamms." And without the formalities of any leave-taking, he rose and shuffled out of the shop.

Tamms watched him, almost regretfully, and when he disappeared down the street, turned to Charlie.

"There, I fear, goes a man who will be a chronic bear upon the Allegheny Central," said he. Tamms had fallen into a way of making these semi-confidences to Charlie; and the latter was struck with the justice of this remark.

This scene was fresh in Charlie's mind the next day when driving with Mamie through the calm, deep woods that clothe the Berkshire hills. Ah! Shakespeare's heroines had a simple time enough; what would they do in these days, when Shylock masks as Romeo, and Othello, turned soldier of fortune, seeks distinction at his mistress's mouth? I fear me even Portia would have found her match.

But Mamie would go to the meet—yes, she would. Where love, inclination, and social ambition coincide, what prudent counsels of a country girl like Gracie could resist them? She wrote that evening, thanking Mrs. Gower for

her invitation, and only on the next day told Gracie what she had done. Gracie knew Mrs. Gower only slightly; though, had she known her a thousand years, she would not have known her well. The kennels were at the "Bogardus Farm," and after the meet there was to be a hunt dinner and a hunt ball. Mrs. Gower had many mansions, many places in which to lay her pretty head—and the heads of her guests—and now, it seems, she had a cottage near by, in which Mamie was to go. And the other guests, as Flossie wrote, were to be only Lord Birmingham, Kitty Farnum—and Mr. Wemyss.

For this meeting was indeed "select;" only of the very gayest, choicest few, those of whose prominence there could be no question in the race after pleasure, only those whose purses and whose persons kept the pace that fashion, for the time, demanded. And both the horses and the dogs were also of the choicest breed and blood, and were worth, each and all, his hundreds or his thousands; and the human beings, too, if of their blood we dare not say so much, were of breeding *à la mode*, and worth, I dare say, any sums you like. John Haviland was not here, nor Lionel Derwent, nor even poor Arthur yet—but only those who made, or seemed to make, the very lightest little game of life.

Should I attempt to describe all this, I should be expected to speak a little of the ladies' dresses—but chiefly of the horses, I am sure. For this fashionable life of ours, the life of so many of those with whom our lines have, thus far, been cast, seems founded, in its last analysis, upon the horse alone. That noble animal, in all his varied uses, under the saddle, in a four-in-hand, at Mrs. Gower's carriage traces—take him all in all, he stands for everything; he is almost the protagonist of Flossie Gower's little play. Sculptors, historians, students of social science, would, in ages yet to come, I am sure, term this the age of the Horse; they would, I say, if Mrs. Gower and her set shall even leave a wrack behind. But the wracks they leave behind are, alas! too often not their own. And to others, perhaps, to Jem Starbuck and the workers in the Allegheny country, as well as to the future historian, this age may rather seem the age of Coal.

So Mamie Livingstone went to the show, and the show was very fine indeed. First there was a pack of fox-hounds — real fox-hounds — and then there was a pack of beagles, sixteen or more, with little curly tails; and the gentlemen and ladies rode some miles behind them, on a scented track, and jumped several fences. And Charlie looked very smart in his pink coat, and took the leaps most daringly; and thereupon Mamie did admire him very much, and began to think seriously of him for a husband.

And the dinner was exquisitely cooked, and quite bright and gay; and the men had all red coats and the women all white throats; and when the ladies left the table the fun was even faster. For when the stories were all told, and they could not talk of the ladies, both because many of the husbands were there and because the subject was a bore at best—and the best of it is surely tête-à-tête—and when even horses had been talked about enough, did not witty Tony Duval go out and come back with the Earl's one black coat? And he tossed it on the damask cloth before them. "A fox!" he cried. "Worry it!" And they worried it; with knives and forks they worried it; perhaps once for the joke, and twice because it was Birmingham's, until of the silk and broadcloth garment some few shreds were left, and the table-cloth a thing of slits and scratches. And then they went into the ball-room, did these merry dogs, and danced with these fine ladies; only some of them chose to walk in the lawns and over the turf steeplechase course, where there was shrubbery, and hurdles, and much helping over of carefully preserved stone walls.

Have you had a good time, reader? Here we have been a hundred miles on the outside of a coach, and quite three weeks in the open air, and, I am sure, have had dinners and balls galore. Take your last deep breath of all these joys, for all, even of our lines, may not fall in such pleasant places. What—we shall not say we are tired of it—we who have been with the fortunate few? Why, who can make more, who could make more, of life than they? Is it not a pleasant play?

Well, a secret, then: Van Kull and Wemyss, too, are bored, and even Tony Duval finds it slow. For Flossie Gower I speak not; she has a great, stillfed, self-pride, and when that, too, grows stale—she is too clever to let it bore her—she will leave it first; and Birmingham is saved by his British atmosphere and healthy, dormant brain.

All this is why Charlie Townley—no, Charlie fears rather that he may not always be rich enough to keep it up, and is making up to poor Mamie, in consequence. But that is why, or all these things are why, Van Kull walked off with Mrs. Hay, that night; and even Birmingham made overtures to Kitty Farnum; and Charlie did propose to Mamie Livingstone; and Caryl Wemyss propo— told Mrs. Gower that he loved her.

MID-SUMMER.

By Allan Simpson Botsford.

THERE was a quietude about the place
We never found elsewhere; the boulders gray
Hung heavily beneath the water's edge;
Below, the dam was sunny and chalk-white,
Where slept the tea-green water at repose;
No shim'ring ripple skimmed the surface smooth,
Save when a singing line cut into it—
Or a far snipe kissed it with downy breast.
Dim shadows, downward cast by the slow bird,
High circling in the heaven—came and went;
Queer savors of strange verdure filled the air—
The breath of ivy, and of hidden bloom,
And of wild pennyroyal and many mints.
No sound was there, but that of high delight!
The robin lent her music free as air,
The thrush sang in the underwood at hand,
While at uncertain intervals there came
From some deep field of yellow tangled wheat,
Shrill whistlings of a summer-smitten quail;
The cat-bird in the red haws near us tuned
His voice to many choruses, and sang
In mimicry of all the happy host.
It was a place where hours went their ways
As softly as sweet dreams go down the night,
Untroubled by the wisdom of the wise,
Or hampered by the dint of a desire.
The great good-hearted beeches over us,
Steeped the sweet grass in clever depths of shade,
Wherein our cloth was spread at the noon-hour;
And lazily as ancient kings we dined,
And smoked, and chatted, and there spent the day,
Tipping our bumpers, while in toasts arrayed,
Our happy souls triumphant over men,
Walked down the many splendid ways of fame,
Until our steps were lost—or strangely blurred—
As the red sun crept westward through the dusk.

POPULAR AUTHORS.

By Robert Louis Stevenson.

THE scene is the deck of an Atlantic liner, close by the doors of the ashpit, where it is warm: the time, night: the persons, an emigrant of an inquiring turn of mind and a deck hand. "Now," says the emigrant, "is there not any book that gives a true picture of a sailor's life?"—"Well," returns the other, with great deliberation and emphasis, "there is *one*; that is *just* a sailor's life. You know all about it, if you know that."—"What do you call it?" asks the emigrant.—"They call it *Tom Holt's Log*," says the sailor. The emigrant entered the fact in his note-book: with a wondering query as to what sort of stuff this *Tom Holt* would prove to be: and a double-headed prophecy that it would prove one of two things: either a solid, dull, admirable piece of truth, or mere ink and banditti. Well, the emigrant was wrong: it was something more curious than either, for it was a work by STEPHENS HAYWARD.

I.

IN this paper I propose to put the authors' names in capital letters; the most of them have not much hope of durable renown; their day is past, the poor dogs—they begin swiftly to be forgotten; and HAYWARD is of the number. Yet he was a popular writer; and what is really odd, he had a vein of hare-brained merit. There never was a man of less pretension; the intoxicating presence of an ink-bottle, which was too much for the strong head of Napoleon, left him sober and light-hearted; he had no shade of literary vanity; he was never at the trouble to be dull. His works fell out of date in the days of printing. They were the unhatched eggs of Arab tales; made for word-of-mouth recitation, certain (if thus told) to captivate an audience of boys or any simple people—certain, on the lips of a generation or two of public story-tellers, to take on new merit and become cherished lore. Such tales as a man, such rather as a boy, tells himself at night, not without smiling, as he drops asleep; such, with the same exhilarating range of incident and the same trifling ingenuities, with no more truth to experience and scarcely more cohesion, HAYWARD told. If we so consider *The Diamond Necklace, or the Twenty Captains*, which is what I remember best of HAYWARD, you will find that staggering narrative grow quite conceivable.

A gentleman (his name forgotten—HAYWARD had no taste in names) puts an advertisement in the papers, inviting nineteen other gentlemen to join him in a likely enterprise. The nineteen appear promptly, nineteen, no more, no less: see the ease of the recumbent story-teller, half-asleep, hanging on the verge of that country of dreams, where candles come alight and journeys are accomplished at the wishing! These twenty, all total strangers, are to put their money together and form an association of strict equality: hence its name—*The Twenty Captains*. And it is no doubt very pleasant to be equal to anybody, even in name; and mighty desirable (at least in the eyes of young gentlemen hearing this tale in the school dormi-

tory) to be called captain, even in private. But the deuce of it is, the founder has no enterprise in view, and here you would think, the least wary capitalist would leave his chair, and buy a broom and a crossing with his money, rather than place it in the hands of this total stranger, whose mind by his own confession was a blank, and whose real name was probably Macaire. No such matter in the book. With the ease of dreaming, the association is founded; and again with the ease of dreaming (HAYWARD being now three parts asleep) the enterprise, in the shape of a persecuted heiress and a truly damnable and idiotic aristocrat, appears upon the scene. For some time, our drowsy story-teller dodges along upon the frontiers of incoherence, hardly at the trouble to invent, never at the trouble to write literature; but suddenly his interest brightens up, he sees something in front of him, turns on the pillow, shakes off the tentacles of slumber, and puts his back into his tale. Injured innocence takes a special train to Dover; damnable idiot takes another and pursues; the twenty captains reach the station five minutes after, and demand a third. It is against the rules, they are told; not more than two specials (here is good news for the railway traveller) are allowed at the same time upon the line. Is injured innocence, with her diamond necklace, to lie at the mercy of an aristocrat? Forbid it, Heaven and the Cheap Press! The twenty captains slip unobserved into the engine-house, steal an engine, and forth upon the Dover line! As well as I can gather, there were no stations and no pointsmen on this route to Dover, which must in consequence be quick and safe. One thing it had in common with other and less simple railways, it had a line of telegraph wires; and these the twenty captains decided to destroy. One of them, you will not be surprised to learn, had a coil of rope—in his pocket, I suppose; another—again I shall not surprise you—was an Irishman and given to blundering. One end of the line was made fast to a telegraph post; one (by the Irishman) to the engine: all aboard—full steam ahead—a double crash, and there was the telegraph post upon the ground, and here—mark my HAYWARD! was something carried away upon the engine. All eyes turn to see what it is: an integral part of the machinery! There is now no means of reducing speed; on thunders the engine, full steam ahead, down this remarkable route to Dover; on speed the twenty captains, not very easy in their minds. Presently, the driver of the second special (the aristocrat's) looks behind him, sees an engine on his track, signals, signals in vain, finds himself being overhauled, pokes up his fire and—full steam ahead in flight. Presently after, the driver of the first special (injured innocence's) looks behind, sees a special on his track and an engine on the track of the special, signals, signals in vain, and he too—full steam ahead in flight. Such a day on the Dover line! But at last the second special smashes into the first, and the engine into both; and for my part, I think there was an end of that romance. But HAYWARD was by this time fast asleep: not a life was lost; nor only that, but the various parties recovered consciousness and resumed their wild career (only now, of course, on foot and across country) in the precise original order: injured innocence leading by a length, damnable aristocrat with still more damnable valet (like one man) a good second, and the twenty captains (again like one man) a bad third; so that here was the story going on again just as before, and this appalling catastrophe on the Dover line reduced to the proportions of a morning call. The feelings of the company (it is true) are not dwelt upon.

Now, I do not mean that *Tom Holt* is quite such high-flying folly as *The Twenty Captains;* for it is no such thing, nor half so entertaining. Still it flowed from the same irresponsible brain; still it was the mere drowsy divagation of a man in bed, now tedious, now extravagant—always acutely untrue to life as it is, often pleasantly coincident with childish hopes of what life ought to be—as (for instance) in the matter of that little pleasure-boat, rigged, to every block and rope, as a full-rigged ship, in which Tom goes sailing—happy child! And this was the work that an actual tarry seaman recommended for a picture of his own existence!

II.

It was once my fortune to have an interview with Mr. Hayward's publisher: a very affable gentleman in a very small office in a shady court off Fleet Street. We had some talk together of the works he issued and the authors who supplied them; and it was strange to hear him talk for all the world as one of our publishers might have talked of one of us, only with a more obliging frankness, so that the private life of these great men was more or less unveiled to me. So and so (he told me, among other things) had demanded an advance upon a novel, had laid out the sum (apparently on spirituous drinks) and refused to finish the work. "We had to put it in the hands of Bracebridge Hemming," said the publisher with a chuckle: "he finished it." And then with conviction: "A most reliable author, Bracebridge Hemming." I have no doubt the name is new to the reader; it was not so to me. Among these great men of the dust, there is a touching ambition which punishes itself; not content with such glory as comes to them, they long for the glory of being bound—long to invade, between six boards, the homes of that aristocracy whose manners they so often find occasion to expose; and sometimes (once in a long lifetime) the gods give them this also, and they appear in the orthodox three volumes, and are fleered at in the critical press, and lie quite unread in circulating libraries. One such work came in my mind: *The Bondage of Brandon*, by Bracebridge Hemming. I had not found much pleasure in the volumes; but I was the more glad to think that Mr. Hemming's name was quite a household word, and himself quoted for "a reliable author," in his own literary circles.

On my way westward from this interview, I was aware of a first floor in Fleet Street rigged up with wire window-blinds, brass straps, and gilt lettering: Office for the sale of the works of Pierce Egan. "Ay, Mr. Egan," thought I, "and have you an office all to yourself!" And then remembered that he too had once revelled in three volumes: *The Flower of the Flock* the book was called, not without pathos for the considerate mind; but even the flower of Egan's flock was not good enough for the critics or the circulating libraries, so that I purchased my own copy, quite unread, for three shillings at a railway bookstall. Poor dogs, I thought, what ails you, that you should have the desire of this fictitious upper popularity, made by hack journalists and countersigned by yawning girls? Yours is the more true. Your butcher, the landlady at your seaside lodgings—if you can afford that indulgence, the barmaid whom you doubtless court, even the Rates and Taxes that besiege your door, have actually read your tales and actually know your names. There was a waiter once (or so the story goes) who knew not the name of Tennyson: that of Hemming perhaps had brought the light into his eyes, or Viles perhaps, or Errym, or the great J. F. Smith, or the unutterable Reynolds, to whom even here I must deny his capitals.—Fancy, if you can (thought I), that I languish under the reverse of your complaint; and being an upper-class author, bound and criticised, long for the penny number and the weekly woodcut!

Well, I know that glory now. I have tried and on the whole I have failed: just as Egan and Hemming failed in the circulating libraries. It is my consolation that Charles Reade nearly wrecked that valuable property the *London Journal*, which must instantly fall back on Mr. Egan; and the king of us all, George Meredith, once staggered the circulation of a weekly newspaper. A servant-maid used to come and boast when she had read another chapter of *Treasure Island:* that any pleasure should attend the exercise never crossed her thoughts. The same tale, in a penny paper of a high class, was mighty coldly looked upon; by the delicate test of the correspondence column, I could see I was far to leeward; and there was one giant on the staff (a man with some talent, when he chose to use it) with whom I very early perceived it was in vain to rival. Yet I was thought well of on my penny paper for two reasons: one that the publisher was bent on raising the standard—a difficult enterprise in which he has to a great extent succeeded; the other, because (like Bracebridge

Hemming) I was "a reliable author." For our great men of the dust are apt to be behind with copy.

III.

How I came to be such a student of our penny press, demands perhaps some explanation. I was brought up on *Cassell's Family Paper;* but the lady who was kind enough to read the tales aloud to me was subject to sharp attacks of conscience. She took the *Family Paper* on confidence; the tales it contained being Family Tales, not novels. But every now and then, something would occur to alarm her finer sense; she would express a well-grounded fear that the current fiction was "going to turn out a Regular Novel;" and the family paper, with my pious approval, would be dropped. Yet neither she nor I were wholly stoical; and when Saturday came round, we would study the windows of the stationer and try to fish out of subsequent woodcuts and their legends the further adventures of our favorites. Many points are here suggested for the casuist; definitions of the Regular Novel and the Family Tale are to be desired; and quite a paper might be written on the relative merit of reading a fiction outright and lusting after it at the stationer's window. The experience at least had a great effect upon my childhood. This inexpensive pleasure mastered me. Each new Saturday I would go from one newsvender's window to another's, till I was master of the weekly gallery and had thoroughly digested "The Baronet Unmasked," "So and so approaching the Mysterious House," "The Discovery of the Dead Body in the Blue Marl Pit," "Dr. Vargas Removing the Senseless Body of Fair Lilias," and whatever other snatch of unknown story and glimpse of unknown characters that gallery afforded. I do not know that I ever enjoyed fiction more; those books that we have (in such a way) avoided reading, are all so excellently written! And in early years, we take a book for its material, and act as our own artists, keenly realizing that which pleases us, leaving the rest aside. I never supposed that a book was to command me until, one disastrous day of storm, the heaven full of turbulent vapors, the streets full of the squalling of the gale, the windows resounding under bucketfuls of rain, my mother read aloud to me *Macbeth*. I cannot say I thought the experience agreeable; I far preferred the ditch-water stories that a child could dip and skip and doze over, stealing at times materials for play; it was something new and shocking to be thus ravished by a giant, and I shrank under the brutal grasp. But the spot in memory is still sensitive; nor do I ever read that tragedy but I hear the gale howling up the valley of the Leith.

All this while, I would never buy upon my own account; pence were scarce, conscience busy; and I would study the pictures and dip into the exposed columns, but not buy. My fall was brought about by a truly romantic incident. Perhaps the reader knows Neidpath Castle, where it stands, bosomed in hills, on a green promontory; Tweed at its base running through all the gamut of a busy river, from the pouring shallow to the brown pool. In the days when I was thereabout, and that part of the earth was made a heaven to me by many things now lost, by boats, and bathing, and the fascination of streams, and the delights of comradeship, and those (surely the prettiest and simplest) of a boy and a girl romance—in those days of Arcady there dwelt in the upper story of the castle one whom I believe to have been gamekeeper on the estate. The rest of the place stood open to incursive urchins; and there, in a deserted chamber, we found some half-a-dozen numbers of *Black Bess, or the Knight of the Road*, a work by Edward Viles. So far as we were aware, no one had visited that chamber (which was in a turret) since Lambert blew in the doors of the fortress with contumelious English cannon. Yet it could hardly have been Lambert (in whatever hurry of military operations) who had left these samples of romance; and the idea that the gamekeeper had anything to do with them was one that we discouraged. Well, the offence is now covered by prescription; we took them away; and in the shade of a contiguous fir-wood, lying on blaeberries, I made my first acquaintance with the art of Mr. Viles. From

this author, I passed on to MALCOLM J. ERRYM (the name to my present scrutiny, suggesting an anagram on Merry), author of *Edith the Captive*, *The Treasures of St. Mark*, *A Mystery in Scarlet*, *George Barington*, *Sea-drift*, *Townsend the Runner*, and a variety of other well-named romances. Memory may play me false, but I believe there was a kind of merit about ERRYM. The *Mystery in Scarlet* runs in my mind to this day; and if any hunter after autographs (and I think the world is full of such) can lay his hands on a copy even imperfect, and will send it to me in the care of Messrs. Scribner, my gratitude (the muse consenting) will even drop into poetry. For I have a curiosity to know what the Mystery in Scarlet was, and to renew acquaintance with King George and his valet Norris, who were the chief figures in the work and may be said to have risen in every page superior to history and the ten commandments. Hence I passed on to Mr. EGAN, whom I trust the reader does not confuse with the author of *Tom and Jerry;* the two are quite distinct, though I have sometimes suspected they were father and son. I never enjoyed EGAN as I did ERRYM; but this was possibly a want of taste, and EGAN would do. Thence again I was suddenly brought face to face with Mr. Reynolds. A school-fellow, acquainted with my debasing tastes, supplied me with *The Mysteries of London*, and I fell back revolted. The same school-fellow (who seems to have been a devil of a fellow) supplied me about the same time with one of those contributions to literature (and even to art) from which the name of the publisher is modestly withheld. It was a far more respectable work than *The Mysteries of London*. J. F. SMITH when I was a child, ERRYM when I was a boy, HAYWARD when I had attained to man's estate, these I read for pleasure; the others, down to SYLVANUS COBB, I have made it my business to know (as far as my endurance would support me) from a sincere interest in human nature and the art of letters.

IV.

WHAT kind of talent is required to please this mighty public? that was my first question, and was soon amended with the words, "if any." J. F. SMITH was a man of undeniable talent, ERRYM and HAYWARD have a certain spirit, and even in EGAN the very tender might recognize the rudiments of a sort of literary gift; but the cases on the other side are quite conclusive. Take Hemming, or the dull ruffian Reynolds, or Sylvanus Cobb, of whom perhaps I have only seen unfortunate examples —they seem not to have the talents of a rabbit, and why anyone should read them is a thing that passes wonder. A plain-spoken and possibly high-thinking critic might here perhaps return upon me with my own expressions. And he would have missed the point. For I and my fellows have no such popularity to be accounted for. The reputation of an upper-class author is made for him at dinner-tables and nursed in newspaper paragraphs, and when all is done, amounts to no great matter. We call it popularity, surely in a pleasant error. A flippant writer in the *Saturday Review* expressed a doubt if I had ever cherished a "genteel" illusion; in truth I never had many, but this was one—and I have lost it. Once I took the literary author at his own esteem; I behold him now like one of those gentlemen who read their own MS. descriptive poetry aloud to wife and babes around the evening hearth; addressing a mere parlor coterie and quite unknown to the great world outside the villa windows. At such pigmy reputation, Reynolds, or COBB, or MRS. SOUTHWORTH can afford to smile. By spontaneous public vote, at a cry from the unorganic masses, these great ones of the dust were laurelled. And for what?

Ay, there is the question: For what? How is this great honor gained? Many things have been suggested. The people (it has been said) like rapid narrative. If so, the taste is recent, for both Smith and Egan were leisurely writers. It has been said they like incident, not character. I am not so sure. G. P. R. James was an upper-class author, J. F. Smith a penny-press-man; the two are in some ways not unlike; but—here is the curiosity—James made far the better story, Smith was far the more successful with his characters.

Each (to bring the parallel home) wrote a novel called *The Stepmother;* each introduced a pair of old maids; and let anyone study the result! James's *Stepmother* is a capital tale, but Smith's old maids are like Trollope at his best. It is said again that the people like crime. Certainly they do. But the great ones of the dust have no monopoly of that, and their less fortunate rivals hammer away at murder and abduction unapplauded.

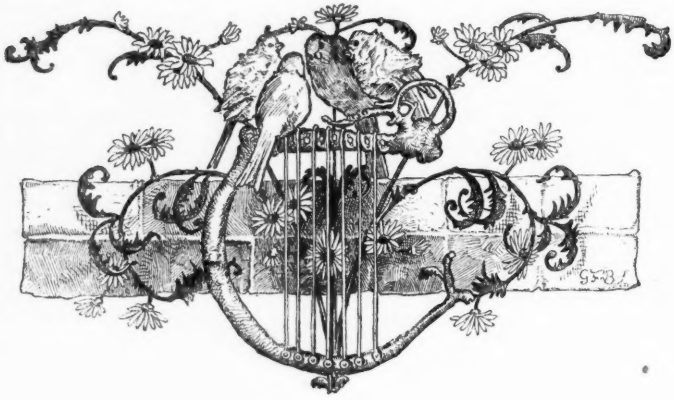
I return to linger about my seaman on the Atlantic liner. I shall be told he is exceptional. I am tempted to think, on the other hand, that he may be normal. The critical attitude, whether to books or life—how if that were the true exception? How if *Tom Holt's Log,* surreptitiously perused by a harbor-side, had been the means of sending my mariner to sea? How if he were still unconsciously expecting the Tom Holt part of the business to begin—perhaps to-morrow? How, even, if he had never yet awakened to the discrepancy between that singular picture and the facts? Let us take another instance. *The Young Ladies' Journal* is an elegant miscellany which I have frequently observed in the possession of the barmaid. In a lone house on a moorland, I was once supplied with quite a considerable file of this production and (the weather being violent) devoutly read it. The tales were not ill done; they were well abreast of the average tale in a circulating library; there was only one difference, only one thing to remind me I was in the land of penny numbers instead of the parish of three volumes: Disguise it as the authors pleased (and they showed ingenuity in doing so) it was always the same tale they must relate: the tale of a poor girl ultimately married to a peer of the realm or (at the worst) a baronet. The circumstance is not common in life; but how familiar to the musings of the barmaid! The tales were not true to what men see; they were true to what the readers dreamed.

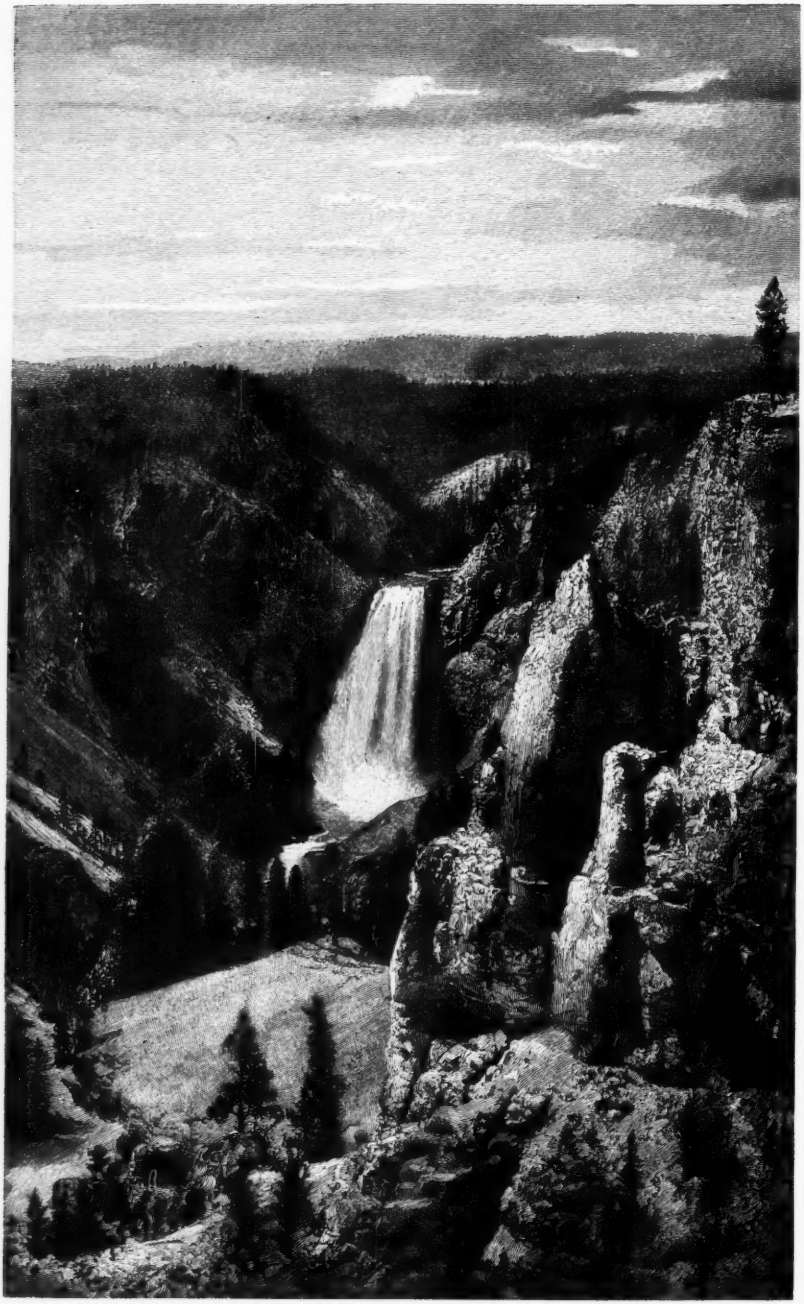
Let us try to remember how fancy works in children; with what selective partiality it reads, leaving often the bulk of the book unrealized, but fixing on the rest and living it; and what a passionate impotence it shows—what power of adoption, what weakness to create. It seems to be not much otherwise with uneducated readers. They long, not to enter into the lives of others, but to behold themselves in changed situations, ardently but impotently preconceived. The imagination (save the mark!) of the popular author here comes to the rescue, supplies some body of circumstance to these phantom aspirations, and conducts the readers where they will. Where they will: that is the point; elsewhere they will not follow. When I was a child, if I came on a book in which the characters wore armor, it fell from my hand; I had no criterion of merit, simply that one decisive taste, that my fancy refused to linger in the middle ages. And the mind of the uneducated reader is mailed with similar restrictions. So it is that we must account for a thing otherwise unaccountable; the popularity of some of these great ones of the dust. In defect of any other gift, they have instinctive sympathy with the popular mind. They can thus supply to the shop-girl and the shoe-black vesture cut to the pattern of their naked fancies, and furnish them with welcome scenery and properties for autobiographical romancing.

Even in readers of an upper class, we may perceive the traces of a similar hesitation; even for them, a writer may be too exotic. The villain, even the heroine, may be a Feejee islander, but only on condition the hero is one of ourselves. It is pretty to see the thing reversed in the Arabian tale (Torrens or Burton—the tale is omitted in popular editions) where the Moslem hero carries off the Christian amazon; and in the exogamous romance, there lies interred a good deal of human history and human nature. But the question of exogamy is foreign to the purpose. Enough that we are not readily pleased without a character of our own race and language; so that, when the scene of a romance is laid on any distant soil, we look with eagerness and confidence for the coming of the English traveller. With the readers of the penny-press, the thing goes further. Burning as they are to penetrate into the homes of the peerage,

they must still be conducted there by some character of their own class, into whose person they cheerfully migrate for the time of reading. Hence the poor governesses supplied in the *Young Ladies' Journal.* Hence these dreary virtuous *ouvriers* and *ouvrières* of Xavier de Montépin. He can do nothing with them; and he is far too clever not to be aware of that. When he writes for the *Figaro,* he discards these venerable puppets and doubtless glories in their absence; but so soon as he must address the great audience of the half-penny journal, out come the puppets, and are furbished up, and take to drink again, and are once more reclaimed, and once more falsely accused. See them for what they are—Montépin's decoys; without these he could not make his public feel at home in the houses of the fraudulent bankers and the wicked dukes.

The reader, it has been said, migrates into such characters for the time of reading; under their name escapes the narrow prison of the individual career, and sates his avidity for other lives. To what extent he ever emigrates again, and how far the fancied careers react upon the true one, it would fill another paper to debate. But the case of my sailor shows their grave importance. "Tom Holt does not apply to me," thinks our dully-imaginative boy by the harbor-side, "for I am not a sailor. But if I go to sea it will apply completely." And he does go to sea. He lives surrounded by the fact, and does not observe it. He cannot realize, he cannot make a tale of his own life; which crumbles in discrete impressions even as he lives it, and slips between the fingers of his memory like sand. It is not this that he considers in his rare hours of rumination, but that other life, which was all lit up for him by the humble talent of a Hayward—that other life which, God knows, perhaps he still believes that he is leading—the life of Tom Holt.





LOWER FALLS AND CAÑON OF THE YELLOWSTONE.